

Civil Service Journal



Vol. 2 No. 1

July-September 1961

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MANPOWER FOR MISSILES

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DOCUMENTS

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Volume 2 Number 1
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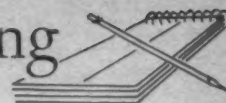
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U.S. Civil Service Commission

JOHN W. MACY, Jr. *Chairman*
FREDERICK J. LAWTON. . . *Commissioner*
WARREN B. IRONS. . . *Executive Director*

Worth Noting



TASK FORCE: President Kennedy has named a top-level task force headed by Secretary of Labor Goldberg to review and advise him on employee-management relations in the Federal service. The objective of the task force is to "improve practices which will assure the rights and obligations of employees, employee organizations, and the executive branch in pursuing the objective of effective labor-management cooperation in the public service." The President instructed the group to provide an opportunity to employees and employee-organization representatives, department and agency officials, consultants in labor-management relations, and interested groups and citizens to present their views. He asked the task force to submit findings and recommendations by November 30, 1961. Other members of the task force include Secretary of Defense McNamara, Postmaster General Day, Budget Bureau Director Bell, CSC Chairman Macy, and Presidential Counsel Sorensen.

PERSONNEL PEOPLE: Robert E. Hampton, 39-year-old career personnel management specialist, has been nominated by President Kennedy to the minority vacancy on the U.S. Civil Service Commission. Mr. Hampton began his Federal service as a vice consul in Munich in 1930 and subsequently served in personnel positions of increasing responsibility with the Air Force and the State Department before his assignment as a White House staff assistant on personnel matters in 1958. With the change in administration, he was retained as a consultant on administrative organizational matters until his recent return to the Pentagon for a special project in the office of the Secretary of the Air Force. . . . The White House has indicated that CSC Chairman John W. Macy, Jr., will be the point of contact for the White House on Federal personnel matters—the former position of Special Assistant to the President for Personnel Management not having been filled. . . . In a further move to provide more direct lines of responsibility in development and evaluation of nationwide programs, CSC has abolished its Bureau of Departmental Operations and established the Bureau of Recruiting and Examining and the Bureau of Personnel Investigations. Donald R. Harvey has been named director of the former and Kimbell Johnson heads the latter. Louis S. Lyon, head of the former Bureau of Departmental Operations, moves to Dallas as director of CSC's 8th Region Office, replacing Wilfred V. Gill, who has been named Assistant to the Chairman. Mr. Gill's principal responsibility will be in connection with the program for fund raising in the Federal service.

PRINCETON CONFERENCE: CSC will sponsor a conference of educators and Federal officials at Princeton University, November 2-4, to help define the adult education and career development needs of Government career officials, CSC Chairman John W. Macy, Jr., and
(Continued—See Inside Back Cover)

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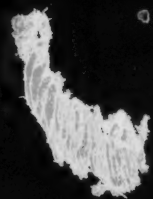
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WASHINGTON — A CLASSROOM IN LIVING GOVERNMENT

by WARREN B. IRONS, *Executive Director,*
U.S. Civil Service Commission

The persisting stereotype of Government as "an army of clerks" still stands on the Federal horizon like a primeval rock, blocking and distorting the citizen's perspective on the kinds of work and careers that modern Government can offer. Although Federal career people are doing pace-setting work in hundreds of different occupations, studies and samplings indicate that this time-worn misconception is still one of the principal obstacles to success of our recruitment programs.

Let me explore with you a new approach to an idea that is not receiving the attention it merits. Visitors by the thousands come to Washington daily from all the States of the Union. This year alone they will number more than 7 million. Over 500,000 of them will be high school students touring in organized groups, like the ones pictured on p. 25.

A great variety of programs and facilities—both public and private—attempt to counsel and assist the visitor to Washington. Yet no center exists to:

- receive and welcome the visitor,
- introduce him to his Nation's Capital,
- dramatize our American heritage, and
- help him achieve a better understanding of his Government and the people who serve it.

One is needed. The focal point could be similar to the visitors' center at Colonial Williamsburg, with a specially produced 30- to 60-minute graphic documentary film being given frequent or continuous showings. The story of the film would be the visitor's introduction to Washington. Opening with a post-Revolutionary setting, the selection of the site, the planning, establishment and growth of the city, the film—particularly in the beginning—might concentrate on the city itself and the points of historic interest to be seen by the visitor.

(Continued—See INSIGHT, page 32.)

First Year of Health Benefits:

"SO FAR— SO GOOD"

by ELIZABETH F. MESSER
Assistant to the Director
Bureau of Retirement and Insurance
U.S. Civil Service Commission

"So far, so good."

"OK as is."

"It stinks. Scrap it."

"I am absolutely satisfied."

THESE comments illustrate the wide range of employee reaction to their health benefits program, now exactly one year old. They are direct quotes from some of the thousands of employee questionnaires being used by the Commission as one part of a systematic, continuing review of the program. Additional information is being obtained from other sources in other ways—from agency installations, through personal visits and on-the-spot discussion, and from carriers' accounting and statistical records, maintained separately for the Federal program and subject to audit by the Civil Service Commission and the General Accounting Office.

All this is being done for a double-barreled purpose: to see that Government employees get as much as possible for their health insurance dollar, and to see that they get, as nearly as possible within the bounds of a balanced program, the particular benefits most of them want and need.

AROUND THE WORLD SURVEY

Thousands of employees, selected by taking every tenth name from the rosters kept by personnel offices, have been asked the questions shown in Figure 1. So far, unsigned questionnaires completed by nearly 80,000 employees, covered by 36 different health plans, have been coded, card-punched, and summarized. These



employees are in every State of the Union, Puerto Rico, Guam and other Pacific Islands, Europe, and Asia. The results to date:

- Only 10.5 percent said they would change plans.
- 37.5 percent have used their plans.
- 82.5 percent said they were generally satisfied.
- 17.5 percent were definitely dissatisfied and didn't hesitate to say so, or to explain why.

Why Some Are Dissatisfied

The "Ten Top Troubles" with the plans, according to those who've used them and been dissatisfied, are shown in Figure 2. Dissatisfied employees didn't pull their punches in explaining the reasons:

- "Too much stalling before claim was approved."
- "It takes too long before any action is taken (3 months) . . . This causes us worries, and results in bad credit."
- "Too much bookkeeping and claim submitting."
- "It don't pay enough." "The doctors' fee schedule appears to be only about one-third of the amount actually charged."
- "I want lower premiums, more coverage."
- "I don't like the deductible." "The deductible is too high."
- "Maternity benefits are a joke . . ."
- "Doctor and hospital had not heard of plan."
- "My claim was not fully paid as stipulated in my contract." ". . . Either make house calls as advertised or freely admit that only in case of an extreme emergency would they make house calls."

Changes Employees Want Made

Answering the question about the change most desired in their own plans, employees made comments very similar to those quoted. A larger proportion, however, hit the deductible. Some said abolish it; others said reduce it; still others said substitute a family deductible

for the individual deductibles, so that bookkeeping would be easier. Other changes most wanted: broaden basic, first-dollar coverage; have the plan pay a larger part of the expenses; improve claim procedures and forms; liberalize coverage of home and office calls; expand coverage of X-ray, laboratory, and diagnostic services; provide benefits for dental care; increase maternity benefits; provide local claims service; and improve coverage of out-of-hospital drugs and medicines.

Many employees made suggestions that were not specific to any one plan. Most-frequently-made suggestions of this type are listed in Figure 3. Far out in front of all others in this group was the request for more specific and detailed information, especially about benefits. Many employees say the brochures are too brief, too vague, and too general—but others want them shorter, less technical, and "understandable to everybody." Many feel the brochures can't be relied on as a "policy" or "certificate" would be.

Another suggestion frequently made: establish lower rates for special groups of employees—but some think it is the young families not yet subject to the ailments of middle- and old-age who should qualify for these lower rates, while others think that the older couples who have already raised their families and have fewer dependents and no need for maternity benefits should qualify for them. Some suggest rebates for people who don't use benefits for a year; some want different rates for "small" families "with about 3 children," and "large" families with more children; and some want rates tied exactly to the number of persons covered.

Many criticized the Government's lower contribution for married women with nondependent husbands—but one woman, feet firmly on the ground, wrote, "Frankly, I think it would be *nice* to have a nondependent husband. . . ."

Fig. 1

THE SURVEY QUESTIONS

1. What is your enrollment code number?
2. If you could make a choice today, would you choose the same plan?
3. If you have used your plan since the Government program went into effect in July 1960, were you generally satisfied with the handling of your case?
If you were definitely dissatisfied with its handling, what is the main reason?
4. (a) If you feel **STRONGLY** that something about your particular plan should be changed, what one change would you most like to have made? (Be specific.)
(b) Would you be willing to pay more, if necessary, to have this change made?
5. What one suggestion, if any, would you offer to improve the operation or the content of the program as a whole (NOT the benefits of your particular plan, or the way it works)?

Fig. 2

THE TEN TOP TROUBLES

(In order of frequency of mention by employees)

1. Delay in paying claims.
2. Claim forms and procedures need improvement, e.g., too complex, too difficult, forms not readily available.
3. Plan pays too small a part of bill, e.g., fee schedules not "realistic," percent paid by carrier not generous enough.
4. X-ray, laboratory, and diagnostic services should be covered better.
5. Plan should provide more basic, first-dollar coverage.
6. Deductible is hard on enrollees.
7. Maternity benefits should be higher.
8. Doctors or hospitals not familiar with plan, not cooperative.
9. Carriers' representatives not familiar enough with plans, or not helpful to persons with claims.
10. Medical staff, facilities, or services not easily enough accessible; or attitude or competence of medical staff not up to expectations.

A number want "family" defined to include dependent parents, foster children, and over-19-year-olds still in college—while others want to be able to exclude specific family members from their family enrollments.

A basic difference in philosophy shows up clearly in the contrasting viewpoints of those who want what is in effect prepaid medical care covering everything, and those who want insurance only against the big expenses of catastrophic illnesses. Compare these two statements, for example:

"There is no health benefits plan that gives complete coverage at a nominal fee—always exclusion of office

Fig. 3

PROGRAM CHANGES MOST DESIRED

(In order of frequency of mention by employees)

1. Provide more specific and detailed information about benefits, how plans operate, employees' experience with them.
2. Establish "differential risk" premiums—lower rates for special groups.
3. Increase Government contribution for married women with nondependent husbands.
4. Liberalize definition (or its application) of "family."
5. Try to get a "better deal"; "the cost is too high"; "the Government is being taken."
6. Have fewer (or only one) plan; make all plans alike.
7. Offer different types of plans (e.g., one with no maternity benefits; one with basic coverage only; one with catastrophic coverage only).
8. Check or control the charges of doctors, hospitals, and carriers.
9. Increase Government's contribution; have Government pay whole premium.
10. Train doctors and hospitals on provisions and procedures of the plans.

calls, doctor calls, etc., with a sizeable deductible amount of \$50 or \$100. . . . Only advantage is protection of property or savings in the event of a long illness, which is no advantage to anyone who has no property or savings anyway."

"I would prefer a plan that (1) excludes all normal or routine medical expenses and even a degree of hospitalization, as I can afford these kinds of expenses, and (2) covers all major health disasters without limitation."

"Subsidy" for Whom?

A surprisingly large number of employees say that both the employee and Uncle Sam are being "taken" by doctors, hospitals, and the big carriers, and some say that the answer is for the Government to do the job itself, either insuring its own employees or providing direct care for them:

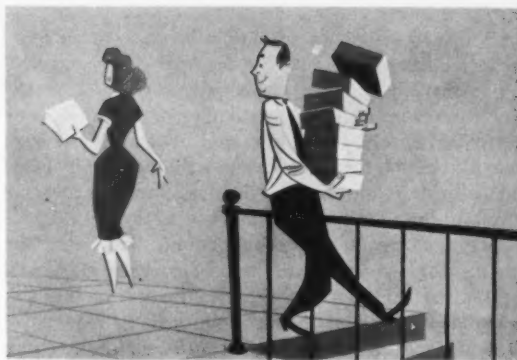
- "The program appears to be a subsidy of the Medical Association, rather than an employee benefit."
- "It is set up for the benefit only of collections by doctors and hospitals. The protection furnished the employee is only incidental. I suggest starting over with the approach of protecting the employee."
- "The program as a whole benefits the insurance companies at the expense of the employee and Gov't."
- "Take the program out of 'private enterprise.' Set up a Federal agency and give the same protection at one-half the present cost."

Many employees call for checks and controls on the practices and the charges of doctors, hospitals, and carriers:

- "Feel that hospitals and doctors are receiving too much for service they are rendering. Some investigation should be made of them."
- "Reduce the cost if possible by close check on the insurers so that a good part of the premium dollar is not expended for administrative salaries, etc."
- "Many persons have complained that they were charged for things they did not receive. . . . Would it be possible to encourage reporting of these instances? It might be a deterrent to padding which would in turn lower our costs."

The Unasked Question

Because the questionnaire was designed to identify problems, it did not provide for any expressions of *satisfaction* with the program. Some employees criticized this omission, and many proceeded to volunteer complimentary "write-ins" which, added to the figures showing that most would keep their present plans and that most users are generally satisfied, help keep the complaints and criticisms in focus. Here are some of



these write-ins:

- "I believe this to be a very good program."
- "I cannot speak too highly of the plan and its services. We have been most satisfied."
- "Make no changes nor allow any to be made. One of the finest, most complete plans I've ever seen. . . ."
- "We had a *very, very* satisfactory experience through a serious and prolonged illness. . . ."
- "Continuation of the plan is vital, and its administration by the Government is excellent."
- "I would commend the agencies involved on what has been accomplished in the short time since July, 1960. . . ."

SURVEYING AND SERVICING

By the end of March, Commission representatives had visited 277 Federal installations, with a total employee population of 340,000, to see how the program is operating and to give any information or assistance that might be needed. Agency officials have welcomed these visits, which will be continued, and have added their own suggestions to those of employees.

The health benefits program, to a far greater extent than most other personnel programs, left agencies free



to improvise, within a framework of guiding principles, to meet unique or unusual situations. The Commission's originally expressed confidence in their ability and willingness to do this has proved to be fully justified by the resourcefulness and the effectiveness with which agency personnel and payroll offices have handled the tremendous job of installing and operating the program. Such minor shortcomings as exist are usually due to misunderstandings or to lack of familiarity with the guides that were issued.

Agencies have had most difficulty determining when various health benefits actions should be made effective; getting notices of actions to carriers promptly enough; and providing adequate health benefits orientation to new appointees. A new information booklet (Form 2809-A) now helps orient the new appointee, and training during the course of the visits of CSC representatives helps familiarize recently designated health benefits advisers with the program and what it requires of them.

Agency officials, like employees, request more detailed information and recommend that all brochures be amplified to describe benefits in greater detail. They, too, want a change in rates for females with nondependent husbands, the deductible applied on a family rather than an individual basis, and coverage extended to include dependents not now eligible.

WHAT'S BEING DONE WITH THE INFORMATION?

The Commission is analyzing all of this information and giving each carrier detailed data (including an opportunity to read actual comments) about the reactions of employees enrolled in its particular plan. Carriers and the Commission are working together, and separately, to make the improvements that can be made:

- Claims procedures are being streamlined.
- New brochures (being written by the carriers and the Commission's staff, working together) will spell out benefits, limitations, and exclusions more specifically and in more detail—though this will inevitably make the brochures more technical and possibly harder for some employees to understand.
- Many plans are readjusting benefits in an effort to make their total package more responsive to employees' needs.
- Carrier representatives are being allowed to come into installations to service employees already enrolled in their plans (but not to advertise, "explain," or sell their plans).
- Any alleged failures to deliver the benefits offered in the brochures are being vigorously checked by the Commission.

BRAKES ON SOME OF THE SUGGESTIONS

Some of the changes suggested by employees and by agencies, however, are impractical; some would have

undesirable effects on the program as a whole; and some are impossible. It's clearly impossible, for instance, to satisfy everybody, when everybody doesn't want or need the same thing; or to make the brochures shorter, simpler, and easier to understand and at the same time more exact, more specific, and more detailed; or to provide more benefits than the available health dollar will buy.

Some of the changes desired would require new legislation, which may or may not be forthcoming. The family rate for married women with nondependent husbands, for example, can be changed only by amending the Health Benefits Act. Bills have been introduced to do this, but none has yet been passed. The "family" definition could be revised, by law, so that dependent parents, foster children, and children over 19 would be covered—but this would almost certainly raise premiums for all employees, including the many thousands who do not have such dependents. It would also be possible, as some employees suggest, to offer a plan "incorporating the best features and most benefits of all the plans"—but the premium of such a plan would then be more than most employees could pay.

The "Red Tape"

Though claim procedures are being improved, all the "red tape" can't be eliminated. For employees' own protection, and to ensure continued solvency of the plans, claims must be reasonably substantiated before they are paid. It's highly questionable that submission of a collection of receipted bills (believed by many employees to be the answer to this problem) is adequate substantiation.

One carrier, for example, requested the additional information called for by his claims instructions but not submitted with the claim. He found that receipts for shampoo, facial tissues and creams, toothpaste, hair curlers, and other toilet articles and household supplies had been included. The indignant employee whose claim for these items was disallowed declined to submit the required additional information with the next claim so that claim, too, was disallowed until the items in it could be properly substantiated. Carriers can't provide many health benefits, and enrollees won't have very good health protection, if such claims are allowed routinely! The health benefits dollar would be dissipated without some "red tape."

About the Costs and the "Subsidies"

Employees, quite humanly, want more coverage for less money. But health insurance, like most other businesses, has to gear what it offers to the amount of money it has to work with. Every benefit has a price tag, and every medical service must be paid for, either directly or through the premium. Because group health insurance doesn't create new money—it just helps spread the

cost of being sick (a) over a longer period of time, and (b) among many people getting sick at different times and in different ways.

Both of the Government-wide plans (which together have 80 percent of the total Federal employee enrollment) are required by the terms of their contracts to be "experience rated." This means that each carrier must keep separate accounts on its Federal employee plan, and adjust rates or benefits for its Federal enrollees on the basis of the actual use that particular group makes of the plan.

The Commission's contracts with these carriers limit what they can charge for operating expenses of the Federal employees' plan. The ceiling for administrative expenses for both the Service Plan and the Indemnity Plan is set at the actual auditable expense, but not to exceed 5.5 percent of premiums collected. At this point it seems doubtful that actual costs will run as high as 5.5 percent, even though they cover the first-year expenses of installing the program. In addition, there is a ceiling on profit (called a "risk charge"), set at 1.5 percent of premiums for the Service Plan and at 1.3 percent of premiums for the Indemnity Plan.

Any difference between premium dollars collected by these plans and the sum of claims paid, administrative expenses, and risk charge must be held in a special reserve for the particular plan concerned, for use either to increase benefits or to postpone increases in premiums. This system assures that premiums are, and will remain, fairly related to the benefits actually provided to Federal employees. An audit program will make sure that the system works as planned.

Although the Commission has placed tight controls on carriers, it does not feel that it has—or should have—a mandate, through this program, to police the medical profession and its practices. Carriers, however, can and do check on what appear to be unreasonable charges and padded bills. When found, such cases are adjusted between the carrier and the purveyor of the service or are referred to the appropriate medical society, a committee of which reviews and adjudicates the reasonableness of a charge. A few cases have been referred for correction of alleged abuses to State medical association committees on ethics. Interestingly, while many employees requested investigation or control of doctors and hospitals, questionnaires completed by some employees registered strong objections to any questioning by carriers of bills presented by doctors or hospitals.

WHAT THE EMPLOYEE IS GETTING

Experience under the various plans is not yet mature, but as this article goes to press, it looks as if at least 90 cents out of every premium dollar collected through the program will be coming back to employees in benefits.

In addition to the estimated 375 million dollars that will have been allocated for benefits for the 16-month contract term ending October 31, 1961, the Federal employee gets other valuable—but all too easily overlooked, forgotten, underrated, or taken-for-granted—protection: The insurance is available to him without regard to, and with no restrictions because of, age or physical condition and with no "waiting periods." It cannot be canceled against his will. It covers his family as fully as it covers him, if he so chooses. It continues for up to a year while he is in nonpay status for illness or other reason—without cost to him.

He can continue his insurance after retirement (if he meets length-of-service and other requirements) with the same benefits and at the same premium that is then being charged active employees, and his survivor-annuitants can continue it after his death. His premiums are paid automatically, through payroll deductions. His agency contributes toward the cost of his premiums. He has, in most plans, *balanced* insurance which includes protection against the moderate bills as well as against the ruinous costs of catastrophic illnesses. And he has something else that few other employer-sponsored health programs offer: a choice of plans. If he doesn't like what he has, he can change during the up-coming "open season."

THE OCTOBER OPEN SEASON

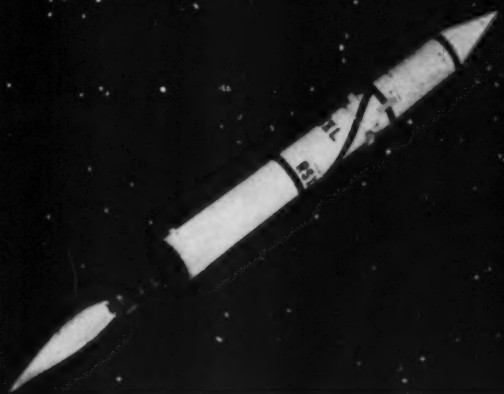
In October of this year, an open season will permit employees to change plans, options, or type of enrollment—or all of these. Every employee eligible for the program will get a new information booklet that outlines essential features common to all plans; lists approved plans and the special requirements for joining some of them; and tells him how to make any changes he desires to make. He will also get new and more detailed brochures (green in color and easily distinguishable from the present white ones) describing the various plans that are available to him. Each plan's brochure will contain a page describing any significant changes being made in the benefits or the rates of that plan. If the employee does not want to change, he does nothing except familiarize himself with any new provisions of his plan. If he does want to change, he has two weeks during the first half of October in which to register his new decision.

What each employee does is his own free choice. Although predictions about the volume of change can be settled only by the final returns from all precincts, present indications are that the volume of change won't run much over 10 percent. The general reaction of the over five million people covered by the program seems to be fairly summarized in the opening quotation—

"So far, so good."



MANPOWER FOR MISSILES



by ROBERT F. MELLO
Director of Civilian Personnel
U.S. Army Ordnance Missile Command
Redstone Arsenal, Alabama

MY initial reaction to the news that the United States had successfully sent a man on a brief ride into space was probably typical—a proud and jubilant thought. "What a great day for America!"

My next thought—"What a great day for the civil servant"—undoubtedly wasn't typical at all. But then, I knew the story behind NASA's selection of the Army-developed Redstone rocket for our man-in-space program.

PEOPLE—THE BASIC LAUNCHING PAD

When the Mercury Redstone rocket vehicle roared aloft at Cape Canaveral on May 5, 1961, it carried more than a dauntless astronaut and the hopes of a nation. Built into every weld and intricate electronic and mechanical system were the creative efforts and unflagging devotion of the civilian and military team—the Army team—that carried the Redstone from a basic idea into finished perfection.

This accomplishment serves also as a tribute to the civil servant—the Government engineer, scientist, supply specialist, procurement analyst, stenographer, typist, and all the others—who, working with the private industry members of our team, made this all possible.

The men and women of the U.S. Army Ordnance Missile Command (AOMC), under the leadership of Major General August Schomburg, are justly proud of the part they played in the development of the Redstone missile. But it didn't "just happen." A missile such as the Redstone is the result of hours, weeks, and years of work—of failures and successes—before it becomes a system that can be given to our Army in the field, or before it can be a means of transportation for an astronaut.

The Army's missiles, from the smallest rocket to the almost fantastic Nike Zeus anti-missile missile, are a product of people—our people. When you read of the firing of one of our families of missiles, you can be assured it represents a living personality—that of the people of the Army Ordnance Missile Command.

What kind of people are they? Well, they are people who orbited the Free World's first earth satellite, people who fired the Free World's first successful deep space probe and solar satellite, men and women who built and fired the first successful intermediate-range ballistic missile, people from every State in the Union who formed the team that sent two monkeys named Able and Baker into space in a ballistic missile and brought them back alive blazing a trail for the astronauts to follow, dedicated civil servants who are now putting every ounce of their talent into perfecting the weapons America needs to remain free. I got to know some of them in 1956 when I became personnel director of the newly formed Army Ballistic Missile Agency (ABMA). I know a lot more

THE AUTHOR

Mr. Mello, a native of California, is Director of Civilian Personnel for the U.S. Army Ordnance Missile Command at Redstone Arsenal, Alabama. He entered Government service in 1942. In 1956, with the formation of the Army Ballistic Missile Agency and later the U.S. Army Ordnance Missile Command, Redstone Arsenal, Ala., he was selected to become the Director of Civilian Personnel for the Command and Civilian Personnel Advisor to General August Schomburg, the Commanding General. In this position, he directs a personnel program that is international in scope, including a nationwide recruiting program organized to supply the vital manpower needs of the highly technical activities supervised by the Command and its agencies.

of them now as personnel director of the ABMA's parent organization, the Army Ordnance Missile Command. They are people who respond magnificently to challenge. Civil servants in every sense of the word.

HOW DID WE GET THEM?

On February 1, 1956, Dr. Wernher von Braun, noted scientist and now the Director of the Marshall Space Flight Center at Huntsville, and his Development Operations Division of Redstone Arsenal, became the nucleus for ABMA. This team of 1,500 scientists, engineers, and support personnel, under the able command of Major General John Bruce Medaris, now retired, was given the job of developing the Jupiter intermediate-range ballistic missile, and getting the Redstone to troops on a "do it now" basis.

The challenge to us in personnel was to expand this nucleus from 1,500 to 5,000 with the best talent available—in a hurry!

The problem: to get the people we needed (1) in the face of the seemingly endless manpower requirements and lure of private industry, and (2) from a labor market that was already hard pressed to meet the demands placed upon it.

The local labor market was entirely inadequate to meet our demands, except for clerical personnel, unskilled labor, and some skilled trades. Our big needs were for the scientists and engineers who could contribute to the knowledge already available, and who could expand our scientific resources to meet the urgent task ahead of us.

In addition, housing and other services within the community were already straining to keep up with Redstone Arsenal, which had been gradually expanding prior to the establishment of ABMA. Huntsville had grown in about six years from a Southern town of some 15,000 that called itself the Watercress Capital of the world, to Rocket City, U.S.A., a bustling city of close to 50,000—and it now has 80,000 people within its expanded borders. Bringing 3,500 new employees and their families into this atmosphere presented other staggering problems that are obvious to a personnel man and manager. The urgent missile programs assigned to



ARMY ENGINEERS check out telemetry network prior to a missile launching.



MERCURY-REDSTONE III during early morning hours of May 5, 1961. Within a few hours the Army-developed booster placed Astronaut Alan B. Shepard, Jr., into a 5,100-mile-per-hour flight 302 miles downrange. (NASA Photo)

ABMA were bound to attract other industrial activities to the Huntsville area which would further complicate the community problems.

We had problems—plenty of them. What did we have that would enable us to overcome these problems and give us a foot in the door?

1. We had vital programs that were receiving national attention and the money to back them up.
2. We had Wernher von Braun and his team of rocket scientists, an outstanding group with international reputations.
3. We had a boss who was a doer and a civilian and military staff that didn't know what "can't" means.
4. We had a community that was attractive, had unlimited natural resources, extensive recreational facilities, and a governing body supported by a citizenry that tirelessly worked to meet the challenge ahead.

When you added it all up, there were plenty of plus signs on the balance sheet.

Our problems for recruiting were voiced by General Medaris when he remarked at a staff meeting in 1956, "We have twin problems. One is that of attracting into the orbit of this kind of work younger graduate scientists and graduate engineers who, over a period of years, can be developed into high-class scientists, whether they be in outside laboratories or in our own system.

"Second," General Medaris continued, "we have an even more important requirement: We must avoid the dilution of the capabilities of our top scientists by having

the maximum of balanced support in the field. We can do this by using people with less highly developed capabilities more than we have ever done before."

The method we were to use in attacking this problem was stated by General Medaris as follows: "We must bring in people of lesser present attainment, that is, younger men of capability but not of experience. We must handle our labors so that our senior scientists and experienced people, top men in their fields, attain the twin stature of scientist and teacher by farming out to these people under their control and direction the maximum of work, and encourage their development and so extend their knowledge and efforts. This is the only approach to this situation that is possible."

These were our guidelines—we were in business.

Our first step was to organize an effort which had one objective—mass recruiting. Of course, we also developed a personnel program to support the organization, but our subject is manpower, so the rest we'll assume.

Since our labor market was the entire country, we established four Technical Placement Offices throughout the United States—in New York, St. Louis, Dallas, and San Francisco. A placement officer and clerical assistant were recruited for each office and were given an expedited training program and orientation. Each was assigned an area in the United States that encompassed several civil service regions.

With help from the front office in establishing initial contacts with regional offices, major universities, and Government activities, our recruiters went to work. Their job—get the people we needed!

With the counsel and assistance of each of the eleven Civil Service Commission regional directors and their staffs, whom we personally briefed as to our special needs, contacts were made with every major college and university throughout the United States that was developing talent we could use. Recruiting dates were established, although the season was just about over, and arrangements were made to brief the placement officers, professors, deans, and presidents on our program and needs.

In addition, contacts were made with many Government activities from which we were receiving applications after the program was announced. You can well imagine that our recruiters were not too popular with many of the organizations whose well-trained staffs were getting restless. This feeling we tried to overcome by dealing directly with the personnel offices concerned and avoiding problems created by misunderstanding. We were partially successful, but there are still sore spots here and there. For this we are sorry, but it took a lot of people—within and outside Government—to do this job. Everyone contributed and all can justly take credit for the technical accomplishment.

Results? The first year ABMA expanded 140 percent and we almost doubled our staff of scientific and professional personnel. By the end of 1959 we were completely staffed.



DR. ARTHUR RUDOLPH, Director of R&D Operations, Army Ballistic Missile Agency, discusses electronic wiring diagram with young engineer.

HITTING THE ROAD AGAIN

The tremendous response to our initial all-out effort soon made it actually necessary for us to put on the brakes. We found that the organization and the community could not absorb new people as fast as we were bringing them in. This gave us the opportunity to place greater emphasis on quality and improve our selection criteria.

In 1958 the Army Ordnance Missile Command came into being. The Command became the headquarters for the Army Ballistic Missile Agency, the Army Rocket and Guided Missile Agency, the Redstone Arsenal, and the White Sands Missile Range. The recruiting effort was then expanded, not in size but in scope, to support the entire Command complex.

Then came the news that the von Braun team, now almost 5,000 strong, was to transfer to the National Aeronautics and Space Administration. The Marshall Space Flight Center came into being in July 1960, and the Army was faced with the job of staffing to continue the programs still assigned to it. The Army Ballistic Missile Agency was still in business with a big job to do—only 10 percent of its mission responsibilities were lost, but only 1,400 people were left to do the work.

Major General Schomburg, commanding AOMC, put it this way in his remarks during the transfer ceremony:

"Fortunately, we are retaining the over-all management organization that so ably supported the von Braun team. So we begin with a great asset and we are going to move on as rapidly as we can to create new laboratory assets vital to our mission."

"New assets" in this case meant new people—highly skilled, technically trained people to replace those who were transferred. We had lost the von Braun team and the glamour of the space program; but we still had a program of national interest, a boss who was a doer, and a community that had made tremendous strides and had caught up with the expansion. Our recruiting organization was intact, and our past efforts and experience paid off. Putting the machine in high gear, with an objective of some 1,700 people to hire, we again hit the road.

This time it was easier. In ten months ABMA had reached its authorized ceiling and AOMC was in business as usual. Although we had lost the tremendous capability of the von Braun team, we were able to employ over 400 scientists and engineers, most of them in the experienced category.

COST PER HIRE

Cost? Sure, you can't do a job like this for peanuts. Careful records have been kept of effort versus cost and, in capsule form, here is the result for the 1959-60 season.

For each college student hired.....	\$185
For all other hires.....	235
Average cost per hire.....	210

These costs have been going down as our efforts improve. During the coming year we anticipate a reduction of better than 20 percent in our cost per hire, with a projected per capita cost of \$162.

We feel the results have been worth the cost. The average cost for private industry for this type of recruiting is reported at from \$600 to \$800 per hire.

LOOKING BACK—AND AHEAD

Looking back over the years since 1956 we take a dispassionate view of those often hectic but rewarding years in recruiting. The times were filled with urgency—the security of the nation was involved. We had started late—we had tremendous obstacles to overcome.

Now our recruiting job has settled down a bit. AOMC still has three of the four original offices and there is a big recruiting job yet to do to satisfy the insatiable appetite of our rampaging missile technology.

In doing this job in the future we will be guided by several lessons learned. Perhaps these points will be of help to others.

1. Recruiting is a full-time and continuing job. It cannot be done as an afterthought or as just an additional duty of someone already busy with more demanding tasks. Whether you recruit for 10 or 1,000 it needs the attention of dedicated workers who are fired with a zeal for accomplishment. It is better to do no recruiting at all than to do the job poorly.

2. The shotgun approach to recruiting does not pay off. You must recruit for a specific program rather than display a basket of unrelated items that only confuse the buyer. In our case, missiles are a good product to sell. Coordinated recruiting is all right as an organizational technique to tie unrelated efforts together, but the actual recruiting must be pinpointed. The man who has the job to do must sell his own product.

3. The recruiter must know, specifically and in detail, what the needs of his activity are. He must be able to talk intelligently about the organization he represents, the available jobs, the community situation, and related details. He must also know when the applicant should

be interviewed by a technical man and how to hold his interest until that takes place.

4. The recruiter must know the college or university from which he desires to draw talent. Knowing the placement director is necessary but this is not enough. He must know the academic staff as well, and be able to seek their advice and counsel when specific talent is being sought.

5. The recruiter has a responsibility beyond that assigned him by his own organization. When a Federal recruiter visits a campus or another nongovernment activity, he is "Mr. Government." He must represent his Government with integrity and pride, and be sure the impression he leaves is the very best, whether he is successful in obtaining applicants or not. Further, if he talks with an applicant who is interested in Government, but not the organization the recruiter represents, he *must* fulfill his obligation by giving good advice that will maintain the applicant's interest.

6. Successful recruiting depends on effective public relations. A pre-exposure of potential applicants to an organization's mission and objectives is good business. Not only the recruiter but management must be aware of this. Speeches, appearances on television and radio, participation in meetings and seminars, and other related activities make the organization represented a living, breathing entity that attracts personal interest. Bad press is dangerous, but no press at all is fatal.

One final point. The best salesman you have from a recruiting point of view is a satisfied employee. The public image of an organization, or the entire Federal service for that matter, is reflected by the man on the job. His attitude toward his work, his associates, and his superiors is reflected in every contact he makes—at home, in church, in the stores: everywhere. From this employee—thousands of men and women—comes the real sales pitch that attracts or repels quality applicants.

In a message published in a recent issue of the *Civil Service Journal*, President Kennedy said: "Government service must be attractive enough to lure our most talented people. It must be challenging enough to call forth our greatest efforts. It must be interesting enough to retain their services. It must be satisfying enough to inspire singleminded loyalty and dedication. It must be important enough to each individual to call forth reserves of energy and enthusiasm."

Unless the appeal and importance of Government service, as characterized by the President, can be made a reality throughout the entire service, our mission in the free world can hardly be accomplished. We in the U.S. Army Ordnance Missile Command are striving to do our part in attaining the goal of a better, more stimulating public service, and to see to it that our organization and the civilian employees in it are nurtured by the best talent our country can develop.





LEGAL DECISIONS

RETIREMENT—DISABILITY

McCarter v. Fleming, District Court, District of Columbia, February 15, 1961. The interest in this case is compounded by the presence of two principles, a medical principle and a legal principle. Plaintiff had been involuntarily retired for disability. He wanted to know why. Pursuant to the medical principle that in some types of cases it may be harmful to the patient if he is told the nature of his disability, the Commission's doctors refused to tell him. Instead, the medical information was turned over to a doctor designated by the plaintiff.

In connection with plaintiff's suit for restoration to his position, the Court said that the Commission's actions were not arbitrary or capricious. In addition, the Court ruled that, under existing law, plaintiff was not entitled to a hearing or to confront and cross-examine persons involved in the retirement proceeding.

CONVERSION TO STATUS

Schaller v. United States, Ct. of Claims, April 7, 1961. All the positions in plaintiff's office were brought into the competitive service. Under the Civil Service Rules the incumbents of the positions became eligible to acquire civil-service status if they met certain requirements, one of which was a recommendation by the agency.

Plaintiff, a veteran, and another employee, a non-veteran, were doing similar work. Because the work of the office had been falling off, it was contemplated that the services of one of these employees would not be needed in the near future. The nonveteran was recommended for conversion to status; the veteran was told that, if he tendered his resignation, his conversion to status would be recommended. He refused to do so, remained in his position without status, and was separated in a reduction in force several months later.

The Court awarded back pay from the date of separation to the date of the court order, stating: "Had the agency director not recommended plaintiff for conversion to status because he felt he did not possess the necessary qualifications or was inferior to other employees, we would say he was entirely correct and within his rights. However, the refusal to convert plaintiff, based upon his failure to sign the blank resignation, appears to us to be an act designed to remove plaintiff, and as such was arbitrary, capricious and in violation of plaintiff's rights. In other words, if his failure to sign the resignation in blank was the only reason why plaintiff was not converted to status, and it appears to be the sole reason, the agency was in error in not so doing."

REMOVAL FROM EXCEPTED POSITION

Thomas v. United States, Ct. of Claims, May 3, 1961. "This is a strange case," said the Court, and indeed it is when a nonveteran employee in an excepted position is awarded back pay.

Plaintiff had attended one session of 45 minutes in each of two schools that were on the Attorney General's list of subversive organizations. She noted this fact on her personnel forms; she omitted it from her security forms. She was charged with making a false statement in an official document, and the commanding general ordered her removal. Pending appeal through grievance procedures, she was carried on leave without pay. The final decision of the Secretary of the Army was that a 30-day suspension should be substituted in lieu of removal. By this time she was back in the United States and decided to resign rather than return to her position overseas.

The Court sets the stage for its decision early in the opinion: "The fact that one does not come within the terms of those acts [the Veterans' Preference Act and the Lloyd-LaFollette Act] does not license someone in authority to kick an employee all over the lot as if she had no rights whatever."

Plaintiff was awarded back pay for the time she was on leave without pay pending her appeals at various levels up to the time of her resignation.

MISCELLANY

In other cases, courts made the following decisions:

- Ruled that employees who were detailed to work at a depot approximately 25 miles away from their regular place of employment and who were transported to the depot each morning during the first hour of the work day were not entitled to compensation for time spent in travel on the trip back in the afternoon, which was made on their own time. *Biggs v. U.S.*, Ct. of Claims, March 1, 1961.

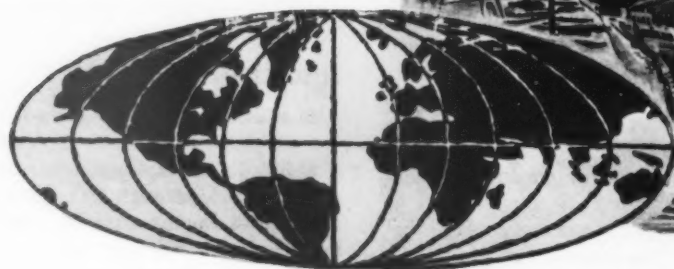
- Held that reserve officers retired for disability and any other officers retired under the Act of April 3, 1939, are not subject to the dual compensation provisions of the Economy Act of 1932, 5 U.S.C. 59a. *Watman v. U.S.*, Ct. of Claims, March 1, 1961.

- Ruled that when an employee was separated and withdrew the entire balance standing to his credit in the retirement fund, his designation of beneficiary on file with the Civil Service Commission was rendered null and void and his subsequent repayment of the sums withdrawn did not have the effect of reinstating the designation. *Menzel v. U.S. & CSC*, District Court, New York (Southern District), March 23, 1961.

John J. McCarthy

The Wondrous World of THE SCIENTIST IN CIVIL SERVICE

[The second of two articles]



WHEN a national magazine asked the research and development heads of major U.S. corporations to identify science's "Top Ten Conquests of the Fifties," they cited not less than seven to which scientists in civil service had made major contributions—the penetration of space, hydrogen fusion (H-bomb), power from nuclear fission, solid state electronics, electronic computers, economical conversion of salt water to fresh water, and commercial jet aviation. And in forecasting what the sixties would bring, the same experts identified five areas in which Federal career researchers are centrally involved—manned space flight, fusion power, thermoelectricity, cancer cure or control, and the synthesis of life.

Mr. Ragan is Deputy Public Information Officer of the Civil Service Commission. Mr. Clark is a Staff Assistant in CSC's Public Information Office.

by WILLIAM M. RAGAN and
LAWRENCE H. CLARK

Whatever wonders science works in this decade, past performance and present prospects predict that scientists in civil service will make key contributions.

TWO GIANT STEPS

Just within recent weeks we have seen giant steps taken toward two of the conquests forecast for this decade—the history-making suborbital space flight of Cmdr. Alan B. Shepard, Jr., and the announcement by the Surgeon General that we may now have "the first drug ever to cure a cancer." Both achievements were founded on efforts of scientists in civil service.

Federal career scientists were the heart and muscle of the "we" that Astronaut Shepard credited with making

possible his out-of-this-world ride atop a Redstone missile. In the midst of receiving national acclaim as the symbol of the successful space shot, Shepard took pains to point out that his venture into space and back depended upon the teamwork of thousands who handle hundreds of phases of Project Mercury.

At the core of Project Mercury is NASA's Space Task Group, a team of over 700 highly skilled scientists, engineers, and technicians with the mission of launching and successfully recovering a manned satellite. Created within a few days after NASA was established on October 1, 1958, the group has headquarters at Langley Field, Va., and is headed by Robert R. Gilruth, a career scientist of 24 years in Government who previously was Assistant Director of NASA's Langley Research Center. His concept of using expendable instrumented free flight models in research led to establishment of NASA's Wallops Island Pilotless Aircraft Research Station, which has contributed much vital data for Project Mercury.

In fact, career scientists at all of NASA's research centers have given important support to Project Mercury. For example, tests of model capsules in the atmosphere entry simulator at Ames Research Center, Moffett Field, Calif., early this year provided assurance that the actual space capsule carrying an astronaut would have no problem in reentering the earth's atmosphere.

Among Gilruth's principal assistants is one who represents the second generation of the same family in science in Government. He is Maxime A. Faget, Chief of the Flight Systems Division of the Space Task Group, who contributed many of the original design concepts embodied in the current manned satellite vehicle. His late father, Dr. Guy H. Faget, was a Public Health Service surgeon who, while assigned to the National Leprosarium in Carville, La., developed a system of using sulphone drugs in the treatment of leprosy—representing the first progress ever made in therapy of the dread disease.

Other key aids to Gilruth are Walter C. Williams, Mercury Operations Director; Charles W. Mathews, Chief of the Operations Division; and Charles H. Zimmerman, Chief of the Engineering and Contract Administration Division—all of whom have had distinguished careers with NASA and its predecessor, NACA. Williams directed flight test research for NASA at Edwards, Calif., for 14 years before joining Mercury. He is in complete charge of any given Mercury flight test and serves as Assistant Director of Space Test Group. Mathews—whose responsibility includes the recovery of the manned satellite—conceived the plan for electronically instrumenting one aircraft so that it could simulate from a control standpoint all advanced types. Zimmerman, who received the Alexander Klemm Award and the Wright Brothers Medal in 1956, gained international renown for his pioneering efforts in developing the vertical and short takeoff and landing concept.

These men are representative of the many who have

contributed to the progress of Project Mercury during the past two-and-a-half years. During that time hundreds of wind-tunnel and aircraft-drop tests have been conducted under direction of the Space Task Group and supported by the entire NASA staff.

The Department of Defense has also contributed important support—its large pool of experienced aeronautical engineering test pilots supplying the astronauts themselves; the Army, Navy, and Air Force providing valuable medical service and personnel; and each of the services providing communications and tracking equipment and facilities for sections of the Mercury network.

The Air Force Systems Command supplies Atlas rocket boosters and launch services, air rescue units, map-making and charting, aircraft for astronaut flight and zero G training, use of the Atlantic Missile Range, and animal specimens for the space flight program.

Army is furnishing a tracking base at its White Sands Missile Range and amphibious vehicles for recovery needs near the launch site. The Redstone rocket, originally developed by the Army and now produced by NASA and industry, is the prime launcher for Mercury suborbital flights.

The Navy has the main responsibility in location, recovery, and delivery of the capsule and astronaut, following flight. NASA also credits much of the progress of the project to date to the assistance and capability of U.S. industry.

It was a team effort, too, that developed and demonstrated the effectiveness of the drug methotrexate in the treatment of a rare form of cancer in pregnant women. This breakthrough in cancer research stems from tests of the chemical on animals begun in 1944 and subsequent studies by the Endocrinology Branch of the National Cancer Institute of the National Institutes of Health, under the direction of Dr. Roy Hertz. The NIH success with the drug has led researchers to speculate that the work may open the way to finding other chemicals to cure other forms of cancer.

Both projects reflect the characteristic anonymity of the scientist in civil service, for no Government researcher has yet attained the fame of a Pasteur, Curie, Einstein, or Salk, although there have been many whose contributions to scientific progress make them fully deserving of wide acclaim. But if they have not won the plaudits of the public, they have rather consistently gained the kind of recognition that has greatest meaning to scientists—that of their peers.

MEN AND THEIR MARKS

The great Ferdinand Rudolph Hassler of Coast Survey fame—whose distinguished career spanned the years 1807 to 1843—was only the first of a long line of scientists who made their mark in Federal service and earned the highest respect of their fellows in and out of Government. The annals of every Federal agency with a scientific function contain the names and recount the



DEEP SEA DIGGING—Dr. Harris B. Stewart, Oceanographer, U.S. Coast and Geodetic Survey, pulls release pin from a Phleger corer to drop it 2 miles from the ship "Explorer" to the ocean floor. The 4-foot core bored from the ocean bed will be studied by Federal geological oceanographers to learn more about the history of the sea and the land beneath. Many scientists believe that oceanography will contribute much to the future of mankind. (Official Coast and Geodetic Survey Photo)

accomplishments of many career scientists who rank among the greats in their fields.

Such men and reputations flowered with the evolution of science as a function in Government—men like Alexander D. Bache, George Davidson, and Joseph Saxton, who furthered the work Hassler began in the Coast Survey . . . Benjamin Franklin Isherwood, who made great contributions in steam engineering while serving the Navy . . . John Wesley Powell, who undertook the mapping of the Nation as head of the Geological Survey . . . Merton B. Waite, Erwin F. Smith, and Theobald Smith, whose work helped to demonstrate the value of agricultural research . . . and many other heroes too numerous to cite here.

But at least these early giants of science in Government, and a few of the many who have followed them, merit mention as representative of the distinguished men and women who have served science and the Nation well during their careers in Federal service.

Fittingly, Hassler's mantle fell on a great-grandson of one of the young Republic's first great men of science, Benjamin Franklin—and Alexander D. Bache proved a worthy torchbearer for both. As Hassler's successor in directing the Coast Survey, Bache not only held true to his predecessor's insistence on scientific principles and practices but was also a leader in the campaign to gain recognition of the necessity for a partnership of science

and Government. Under his direction many advances were made and the work of the Survey expanded with the growing Nation.

Among the significant developments under Bache were the introduction of automatic recording gages in the vital tidal surveys, his own magnetometer, and the establishment of widespread observation stations for geomagnetic surveys. In his role as scientific leader, Bache was a key figure in the establishment and became president of both the American Association for the Advancement of Science and the National Academy of Sciences. In his time he was the unquestioned leader of the scientific community in the United States, winning the highest honors the country had to bestow in science and technology.

His lieutenants in the Survey were also men of stature, among them Davidson and Saxton. After first doing important geodetic work for the Survey in the East, Davidson became the key man in the geodetic and topographic surveys of the West Coast, made significant astronomical observations, and established his own observatory. He published one of the best *Coast Pilots* of all time. Saxton's contributions included a self-registering deep-sea thermometer.

Though the Navy's science effort relied primarily on uniformed officers, such as Simon Newcomb in astronomy and John A. Dahlgren in ordnance, it also employed civilian scientists. Among the best known for his contributions was Isherwood, who came into prominence during the Civil War. Long at work with steam in the Navy, he became head of the new Bureau of Steam Engineering in 1862, and in 1863 and 1865 published volumes of his famous *Experimental Researches in Steam Engineering*, in which he worked out methods for "determining the limit of expansion of the size of steam engines."

John Wesley Powell was among the men of science whose work was significant in the settlement and development of the West in the aftermath of the Civil War. And like Bache before him, he played a key role in shaping the evolving relationship of science and Government.

In the Geological Survey Powell, the second man to head it, was forceful and articulate in advancing his belief in Government responsibility to employ science to "promote the general welfare" and his conviction that private resources on the scale required could never be marshaled. "Before that time comes scientific research will be well endowed by the people of the United States in the exercise of their wisdom and in the confident belief that knowledge is for the welfare of all the people," he prophesied. During his administration, the Survey undertook the monumental job of accurately mapping the Nation, and the project was started sooner and made greater progress than anyone considered possible.

Meanwhile, agricultural science in the Federal service had weathered its early growing pains and was begin-

ning to prove its worth through the work of a number of outstanding men in the last two decades of the 19th Century—Waite made the revolutionary discovery that many bacteria causing plant diseases can be spread by insects. Erwin F. Smith investigated and described for the first time many kinds of bacteria that cause plant diseases, how they cause such diseases, and what plants are susceptible. And Theobald Smith and his associates conducted their brilliant work in the control of tick fever—their discovery that the way to control the fever in cattle is to control the ticks established the pattern to be used later in controlling malaria, yellow fever, and other scourges of the tropics. A few years later, the mosquito was recognized as the carrier of yellow fever, and the work of another Department scientist, L. O. Howard, furnished the basic information for campaigns to eradicate the fever-spreading insect.

Such were the men of Federal science in the 19th Century, establishing the principles, developing the traditions, making discoveries—providing a beacon and setting the challenge for the increasing numbers of scientists in a growing range of specialties to follow.

NEW ERA—NEW ACHIEVEMENTS

The 20th Century brought a new era of technology, new scientific organizations in Government to meet its needs, and a new corps of scientists eager to answer the challenges of the time.

First of the new research agencies was the National Bureau of Standards, established in 1901 and charged by Congress with the development and maintenance of standards for measurement needed by America's developing industries. "Bright young scientists, enlisted from the universities, set out to make NBS the best measurement laboratory in the world," wrote Beverly Smith, Jr., in "The Measurement Pinch" in the *Saturday Evening Post* last year. "They developed precision techniques without which America's famed mass production would have been impossible. They laid the foundation for a new American industry, the manufacture of instruments, which now turns out \$1 billion worth of such devices a year. And for decades they managed, despite chronic shortages of funds and facilities, to keep ahead of America's fast-growing need for better precision."

Achievements of the ingenious NBS staff began early and have grown to impressive numbers in the 60-year history of the Bureau. Among the first developments was the luminous (neon) tube by P. G. Nutting and E. O. Sperling in 1904—26 years before neon lights were made commercially. Other early developments include the determination of the atomic weight of hydrogen by W. A. Noyes, Sr., in 1907; the first international uniformity of electrical units by F. A. Wolfe in 1910; development of the standard of high-frequency current by J. H. Dellinger in 1913; and the development of a radio direction finder by F. W. Dunmore and F. A.

Kolster in 1915. In recent years the Bureau has made extremely precise determinations of such fundamental constants as the atomic weight of silver, the faraday, and the gyromagnetic ratio of the proton.

Among the legendary figures of the Bureau are Dunmore and Harry Diamond. The two are said to have developed more patentable devices between them than any other pair in history. Dunmore has been called the "man who put radio in the American home" for his development, with P. D. Lowell, of the first alternating current radio in 1922. Diamond is perhaps best known as the father of the instrument landing system for aircraft, on which Dunmore collaborated. Diamond and his staff also developed the stub antenna for aircraft, radiosonde (balloon-carried automatic weather instruments used to measure conditions of the atmosphere for weather forecasting), and the proximity fuze in World War II. Five years after his untimely death in 1948, the technical staff he had built up was transferred to the Army Ordnance Corps to establish an outstanding scientific organization that bears his name, the Diamond Ordnance Fuze Laboratories.

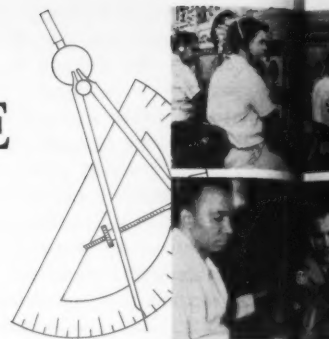
Two years before the United States entered World War II, Dr. Lyman J. Briggs, Director of the Bureau from 1932 until 1945, was named by President Franklin D. Roosevelt to head a committee to investigate the possibilities of uranium fission in warfare. The Manhattan Project and the atomic bomb grew out of the work of the committee. In fact, NBS personnel made

(Continued—See SCIENTIST, page 28.)



ATOMS AND WEATHER—Dr. Paul C. Aebersold (right), Director of Atomic Energy Commission's Office of Isotopes Development, discusses with Oscar M. Bizzell, Chief, Isotope Technology Development Branch, a cutaway model of the newly developed automatic weather reporting station scheduled for use in remote areas of the Arctic. Designed under Dr. Aebersold's direction, the isotope-powered station—now undergoing successful field tests—is expected to transmit unattended for 2 years in the Arctic and marks the first major use of a waste fission product for a safe and beneficial purpose.

BLUEPRINT FOR THE FEDERAL CIVIL SERVICE IN THE 1960's



President Kennedy early in the first 100 days of his administration defined the goals he had in mind for the Federal career service, and stressed the importance of its position in his administration's plans for meeting urgent national problems. Within the past three months, Chairman John W. Macy, Jr., of the Civil Service Commission has addressed many groups interested in the various aspects of Federal personnel administration—such as agency managers, personnel specialists, training officers, professional societies, college officials, employee organizations, and career employees generally—outlining steps that can be taken to translate the President's expressed aims and policies into action programs. By way of a blueprint for the Civil Service of the 1960's, the Civil Service Journal presents an anthology of representative statements on key areas of personnel management, selected from Mr. Macy's recent speeches.

THE NEED FOR MANAGEMENT IMPROVEMENT

"We are on the threshold of a new wave of managerial advance; contributions by mathematicians, statisticians, industrial engineers, and social scientists such as psychologists and economists provide new approaches to solving intricate management problems; we employ the capabilities of electronics. The growth of this new era of science in management must be paralleled by corresponding growth of the manager in sensitivity to and awareness of the emerging issues and problems to which the decision apparatus, technical and human, is to be applied. Management must recognize the importance of courage and speed in decision making, and must have imaginative processes for developing alternative choices of action and the total costs involved, as we are called on to undertake new responsibilities and new workloads without a corresponding increase in resources."

NEW GOALS IN RECRUITMENT

"The hallmark of civil service in the 1960's is a rising emphasis on quality. Our mission is to improve and

strengthen the career service: to attract and retain more of the Nation's best talent, to develop employees' capabilities to the fullest, and to make optimum use of their best skills.

"Without abandoning the highways of the Nation's manpower resources, we shall go into the byways as well, to seek out those with something of value to contribute who might not come to us unbidden. Quality is where we find it, and in public employment there can be no room for any personal prejudices or discrimination on the basis of race, color, religion, or other extraneous considerations."

PUBLIC UNDERSTANDING

"We must combat public misconceptions about the public service, through all the information that is issued to the public by Government agencies about their own programs, accomplishments, and plans, and all the contacts that agency employees have with the public in the course of their work. It is from such elements as these, more than from recruiting publicity, that the public image of the Federal service is formed. Predictions of manpower shortages indicate that we will continue to be faced with the need for conveying to the American public a much more accurate and complete picture of the public service, as we continue our aggressive search for able people to staff all vital programs."

THE APPEAL OF GOVERNMENT WORK

"We need to make clear that the college graduate can not only immediately play a part in some phase of the Government's handling of dramatic problems and situations now making front-page news, but that he can look forward to a life's work full of the same challenge and excitement by choosing a career in civil service; for in each new area requiring Government attention and action there will be an important role for the able career civil servant. I am convinced that the President's call for



daring and dissent and his promise of proud and lively careers in public service will not fall on deaf ears on the campus."

TRAINING AND CAREER DEVELOPMENT

"We must give increased emphasis to improved utilization of people and their skills, and to training them for the tasks that modern Government requires. No employer can give short shrift to employee training in these fast-moving days, and least of all the Nation's largest employer. The Training Act of 1958 was a milestone, but it is already time to set our sights on the next breakthrough in the training field.

"High on the list of urgently needed new programs is the establishment of a senior staff college. Many of us have repeatedly emphasized the need for an advanced career-development experience which would provide the unique content and method suitable for career executives near the pinnacle of their careers who can benefit from a broader consideration of current critical issues and problems involved in defining and achieving national objectives. It is time now to push forward, and I am currently studying alternatives offered from several sources for initiating action to achieve this goal."

PROFESSIONAL GOALS

"Professional groups in the Government can and must play a vital role in helping to assure the development of more people able to meet the ever-increasing needs of changing technology and for attracting and retaining a fair share of them for careers in the civil service. The trials faced by our Nation demand that our great professional organizations cast off remaining vestiges of parochialism and concentrate on improvement, rather than protection, of the breed to meet their broader responsibilities to society and to contribute to the solution of grave national problems."

MEN AND MACHINES

"The human element becomes increasingly critical in the successful utilization of automatic data processing. With Federal expenditures for ADP exceeding a half billion dollars per year, we must see that the selection, training, and utilization of people who work with machines and their products will receive attention commensurate with the machine challenge."

MERIT PROMOTION PROGRAMS

"The President's firm intent that Federal employment practices be maintained without discrimination and with equal opportunity emphasizes the desirability of a critical and continuing review of the operation of promotion programs in the career service. The Commission will soon issue changes in the Federal Personnel Manual which reflect a renewed emphasis upon the primary concepts involved. Each agency should review in detail its own operating methods and practices relating to the promotion of career employees to be certain that individual merit without discrimination is reflected in every aspect of procedures and at every level of operation."

CAREER LEADERSHIP

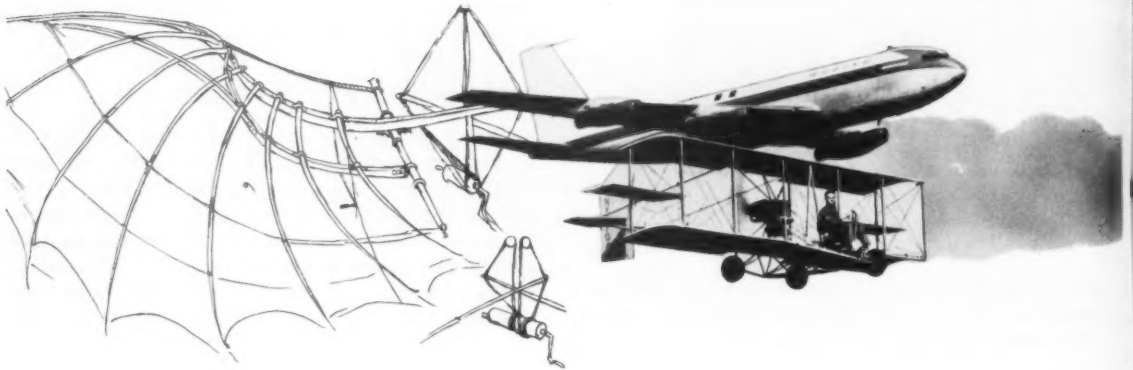
"This administration recognizes clearly—and this is something we can be grateful for—that the career service is not a large, amorphous mass of drones to be pushed in one direction or another. The elements of leadership within the career service itself are to be put to full use. Therefore the career employee with his experience, his command of the facts, must do more than ask for leadership. He must help provide it.

"We must create an administrative climate in which new ideas can flourish. Instead of merely denying the old charge that security of tenure in a career service breeds inertia, the administrator can make tenure a positive force in fostering experimentation. He can formulate standards of performance for subordinates which accentuate the demand for innovation, for invention, and for general disturbance of the status quo."

THE CHALLENGE OF CHANGE

"There is nothing new about change; it is the suddenly accelerated pace, the breakneck speed of twentieth-century change that poses the challenge. A vast range of issues demands new vitality in public administration. President Kennedy has called upon the Federal service for greater creativity, for bold new programs, for imagination and innovation, and through his leadership he has given us a new charter for affirmative and vigorous action. We must produce to justify the confidence that is being placed in us. We must use all of our technical competence in the cause of improved Government on every front."

NEW LOOK FOR BETTER IDEAS



15th Century wing design
by Leonardo da Vinci

by **JOHN D. ROTH**, *Director,*
Federal Incentive Awards Program
U.S. Civil Service Commission

SUGGESTION systems in Government have not only come of age but they have reached a period in their growth where a pause is needed to consider the future course they should pursue.

The Incentive Awards Act of 1954 led to a major upsurge in suggestion activities. Government-wide, the rate of receipt and adoption of employee suggestions has more than doubled. The values gained from employee suggestions in terms of increased efficiency, reduced costs, more production, less waste, saving time, saving material, plus benefits that can't be measured on a dollar basis, demonstrate that suggestion systems are an important management facility for getting improved operations.

NEEDED IMPROVEMENTS

The increased volume of employee suggestions generated during the past 6 years has produced some debits as well as credits. A recent Civil Service Commission staff study revealed a growing concern by management and supervisors, which was generally expressed in this way:

- "Too many marginal suggestions being handled."
- "Not enough encouragement of better value suggestions."
- "Administration is sometimes too complex."

We found that there was a need to refocus on the basic objectives of the system and to be guided by them in day-to-day operations. The suggestion system is not an end in itself but is a means to an end. That end is more efficient and economical Government operations and improved service to the American people. The ultimate measure of success of the system is in demonstrated improvements—both of a tangible and intangible nature—not in the number of suggestions made.

We found that there was need to guard the integrity of the system by seeing to it that the investment of management's time in the evaluation of suggestions is proportional to their potential value. Employee proposals that obviously would not merit the investment of management's time and energy in considering them needed to be screened out. Many of these proposals could be handled quickly and simply down the line by direct supervisory action. On the other hand, suggestions with significant potential value were not always getting attention at a properly high level.

We found that there was a need to increase both employee and management respect and esteem for the system by making sure that the recognition given for adopted ideas is commensurate with anticipated benefits and the desired incentive value.

We found that there was a need to conduct a positive and active program of assisting and guiding employees so that their ideas, when presented, would be most useful to management.

TWO IMPORTANT CHANGES

These were the general areas where improvements were most needed in order to make the system more valuable to management. The Civil Service Commission, after much thought and consultation with agency representatives, tackled these problems by first making two important changes in the basic regulations on incentive awards.

One regulatory change was to set a minimum standard for cash awards. To be eligible for a cash award, a suggestion now must yield measurable benefits of at least \$50, or, if the suggestion produces nonmeasurable benefits, its value must be judged as comparing favorably with one producing at least \$50 worth of measurable benefits. The \$50 minimum standard of value assures that cash awards will be used as an incentive only in cases where the benefits to the Government clearly exceed the cost of processing a suggestion. Cases that don't meet this standard can be recognized by a letter of appreciation or other suitable nonfinancial means.

The second change was to upgrade the Government-wide suggestion awards scale. The minimum award for suggestions that meet the minimum standard of value was raised to \$15. Moreover, suggestions that produce significant measurable benefits can now earn larger awards than ever before—5 percent of the value of the benefits up to \$10,000.

These were the regulatory steps taken by the Commission to decrease the number of suggestions of nominal value while encouraging more suggestions that will yield significant tangible benefits. But these regulation changes will not in themselves assure the kind of suggestion system that best serves the goals of management.

The new regulations provide in effect a foundation—a base upon which agencies can build a value-directed program—as contrasted with a program directed to the solicitation and processing of large numbers of ideas, many of limited usefulness. Unfortunately, there is no magic formula an agency can apply in building a value-directed suggestion system. But there is much that can be done.

NEW PLATFORM

In a recent issuance the Commission advocated adoption of a platform for operating an effective suggestion system. The planks of this platform are:

- (1) Set a minimum standard on the kind of suggestions you will process, and the kind you will recognize with a cash award.
- (2) Promote the program vigorously to get more useful suggestions by—

- Encouraging employees to look for improvements on subjects on which they are expert.
- Giving employees pointers, hints, and thought-starters on how to make better suggestions.
- Encouraging employees to get help from the supervisor in describing the problem, the idea for solution, and the expected benefits.
- Identifying and publicizing problem areas where operating management needs helpful suggestions.

- (3) Make the supervisor the important man, not the forgotten man, in the program—as the stimulator of improvement-mindedness, as counselor for sound, workable suggestions, as the user of good suggestions, as the giver of recognition.
- (4) Administer the program so that—
 - All suggestions are processed in the simplest and most efficient way.
 - High-value suggestions get proper and meaningful consideration.
 - Low-value suggestions get objective consideration with a minimum investment of time.
- (5) Direct the program to serve essential management needs by—
 - Spotlighting for employees the special need for ideas that produce dollar savings or cost reduction.
 - Using recognition and incentive devices as a positive force for helping management carry out other improvement activities.
- (6) Report the specific values and improvements gained from the program.

We can expect that cost-conscious management will support a suggestion system that incorporates these basic features. Such a system will better serve management's interest in improving an organization's operations. It will produce greater values for management of the kind that are clearly evident.

CSC Chairman John W. Macy, Jr., recently said: "I am convinced that the best ideas in Government have not yet been adopted—in fact, they haven't even been put in writing."

These ideas will surely emerge when management at all levels fosters the right conditions—when it actively encourages creativity and innovation and when it demonstrates a willingness to change the status quo.



Some Facts and Observations on ADP in Personnel

More About Push-Button Personnel Management

by CHARLES J. SPARKS, *Chief,*
Management Systems Division
U.S. Civil Service Commission



The first issue of the Civil Service Journal carried an article on "Push-Button Personnel Management." The subject was selected because of expected reader interest and in view of the Civil Service Commission's new automatic data processing program which was then being initiated. The Journal's story was heavily oriented in the direction of experience in private industry because relatively little was known about Federal experience. In the intervening year, a substantial body of knowledge has been assembled on the use of ADP in Federal personnel management. This is an account of what has been learned and some recent Commission actions.

WE now have the results of a recently concluded survey of personnel management ADP applications in Federal agencies and in some of our major industrial firms. This survey was initiated by the Commission last November to meet some practical needs. Agencies seeking to convert personnel management functions to ADP did not have an organized means for determining what had been accomplished elsewhere in the Government. The stage was set for costly duplication unless something was done about it centrally. The survey was therefore launched to gather information which could serve as a basis for:

1. Encouraging the elimination of duplicate systems studies,
2. Stimulating interest in developing improved administrative techniques,
3. Facilitating standardization of techniques in reporting agency actions to the Commission, and
4. Promoting compatibility of ADP systems with civil-service regulations and authorities.

Contact was made with 55 Federal and non-Federal activities. Private corporations participated at the suggestion of a manufacturer who believed that the information exchange would serve industrial as well as governmental purposes. Their participation was welcomed, since it would aid in insuring that new ideas developed

in private industry would find their way expeditiously into governmental thinking.

The participating agencies and companies contributed information on one or more applications. The reports were in the form of narrative discussions, flow charts, and graphic presentations, and covered a wide range of personnel administration activities. Of the total reported, 68 applications involved the use of electronics and 57 involved the use of punched card accounting machinery. (Punched card equipment is within the Bureau of the Budget's definition of ADP.)

The relatively large number of punched card installations identified in the survey was unexpected, since many surveyed activities have access to computer time. In the few agencies where limited survey time allowed discussion of punched card systems, it was found that management in some cases had decided to stay on cards until more definite electronic payoff potential in the situation could be identified. No one had discovered a magic substitute for diligent study of each particular situation in determining the feasibility of ADP—punched card or electronic.

A wide variety of personnel applications was documented in the course of the survey—systems involving various data processing aspects of retention preference, examining and eligibility determination, assignment, classification, profiling, job-man matching, position control, promotion, skills location, annuity pay computation, salary administration, leave accounting, insurance administration, projected manpower requirements, awards, flagging for interview, qualification rating, and general personnel statistics. A few other areas not normally considered personnel, such as work sampling, were also included because the information was volunteered and appeared useful.

A listing such as this demonstrates a viable and widespread activity, but we cannot conclude that a great many sophisticated things are being done with ADP. Upon close scrutiny, we find that in many cases we are doing very much the same type of work that was being done before on a manual basis, only now it is being done more rapidly and more economically. The benefits to be derived from such applications are simply stated—

either clerical costs are reduced, or management is receiving its data more quickly, or both. While manpower savings and more timely management reports have justified straight conversion of existing systems to ADP, management in some cases has gone on to develop more sophisticated systems of far greater utility.

CRACKING REAL PROBLEMS WITH ADP

Among the straight conversions of routine manual work, the survey also identified a number of promising applications which approach the true challenge and tap much of ADP's full potential. For example, the Ogden Air Materiel Area has developed an advanced computer program. This program provides, among other things, for the preliminary selection of candidates for all job openings in the Area. General Electric Company is utilizing a computer to process records which permit a wide variety of complex selections and reports on its professional employees. Applications such as these, and there are others, do not represent the mere conversion of normal clerical processing. They represent capability to record and utilize data which could not be processed efficiently in any other way.

In advanced systems, we found that most activity is centered around selection of candidates for assignments and promotions. The analysis of factors entering into such selections has led to healthy strides toward identifying mechanical decisions which can be clearly set apart from judgmental evaluations. Once this identification is accomplished, the way is open to substituting computer logic up to the point where human judgment must enter the picture. Much remains to be done with the decision-making capabilities of the computer, however. These advanced systems derive most of their potency from using a greater volume of more precise data than was ever possible before the advent of the computer.

Other starts are being made toward more sophisticated manipulation of data. For example, an industrial firm is attempting computer simulation of a reduction in force. It follows that the processing of an actual reduction with a computer would be technically possible if a simulation capability were achieved. It is interesting to note that personnel reaction to "being fired by a machine" is expected by the company to be minimal after it can be demonstrated that a computer makes far fewer errors and can play no favorites.

Experience shows that these systems require a high order of creative thought on the part of the personnel manager as well as the systems designer. The key to success in this field quite clearly depends on dynamic thinking both *before* data is placed in the computer and *after* electronic processing.

ADP payoff is not necessarily automatic, however, nor is it always just around the corner. Non-payoff experimentation, often prerequisite to creative effort, sometimes cannot be avoided. Sometimes an isolated appli-

cation has been found extremely costly until combined with other applications. Still others, to be feasible, await cost reductions through advancing computer technology. The important point in agency experience is that immediate success is not always guaranteed when ADP is applied to personnel operations.

COMMISSION ACTIONS

Although a continuing need for special features to meet unique agency problems was demonstrated by the survey, basic data processing in support of the personnel function is common to all agencies. Since personnel actions affecting a Federal employee are originally recorded on the SF-50, "Notification of Personnel Action," this is the basic input document.

To facilitate the use of ADP equipment and to achieve a greater standardization of personnel inputs, the Commission has revised this form in collaboration with agencies using such equipment. This new SF-50 will also be prescribed for conventional use because it has been found more efficient for preparation on a standard typewriter as well. The form was also designed for possible future use on optical character recognition machines—that is, machines that will be able to "see" and "read." This is the first time in history that a standard form for Government-wide use has been designed for source data automation.

While use of the new SF-50 will standardize the sequencing of basic personnel data, a key element in achieving interchangeability of data lies in the establishment of uniform codes. Most agency codes now in use are diverse because no standard codes have existed. Standard codes for nature of personnel action, location, physical handicap, and other pertinent information are now being developed or adopted and will be issued in the near future.

The cataloging and indexing of materials gathered during the survey of personnel ADP applications have led to the organization of the CSC Automatic Data Processing Information Exchange which opened its doors last May. This new facility, described in CSC Bulletin No. 290-1, is open to all persons interested in using or improving the use of ADP in personnel administration.

In succeeding issues of the *Journal*, a new column, *ADP Billboard*, will carry descriptions of selected agency ADP applications and news of ADP developments of interest to personnel managers. We have a platform of basic knowledge and a number of fundamental actions behind us or well underway. By keeping informed through a free exchange of agency experience, we should be better able to tap the full potential of the best computers on the personnel front—the minds of our career personnel managers—and keep personnel administration in the forefront of the exciting and worthwhile things being done with ADP. The best is yet to come.



Employment Focus



1960 METROPOLITAN AREA SURVEY

A survey of Federal civilian employment by the geographic location of each employee's duty station was made by the Civil Service Commission in December 1960. In gathering figures for metropolitan areas, the "Standard Metropolitan Statistical Areas" defined by the Bureau of the Budget were used. Each area comprises a central city of 50,000 or more population and contiguous counties which meet certain criteria of economic integration and metropolitan characteristics.

3 OUT OF 4 WORK IN BIG CITIES

Three out of four Federal civilian employees in the United States worked in metropolitan areas in 1960; only one in four worked in smaller cities or rural areas. Ten years earlier only two out of three employees worked in areas classified as metropolitan. While the criteria defining metropolitan areas were virtually the same in both periods, population increases had added to the number of places so classified and in some cases had increased the geographic area included in a particular city. The number had grown from 172 areas in 1950 to 215 areas in 1960, including several areas in Puerto Rico.

In December 1960 there were 38 metropolitan areas in which Federal agencies employed more than 10,000 workers. All but three showed increases over their 1950 employment levels. Federal employment was slightly lower in the Washington, D.C., metropolitan area and considerably lower in both Seattle and New Orleans.

NINE AREAS EMPLOY MORE THAN 30,000

The Nation's Capital showed the largest concentration of Federal employees, with 235,864 persons working there. Most Federal agencies have their headquarters offices there and the few with headquarters offices elsewhere usually have a small contact office in Washington. Five agencies, however, have no employees in Washington; they are the Canal Zone Government, the St. Lawrence Seaway Development Corporation, the Virgin Islands Corporation, and the two water study commissions concerned with the Texas river basins and the southeastern river basins. Federal employment in Washington is relatively stable over a period of time, although it fluctuates, as in other areas, for such causes as national emergencies and wars. Employment in 1960 was 1 percent below that in 1950.

The New York area was second in size with 129,478 Federal employees in 1960, about 4 percent above the 1950 level. About half of the Federal agencies have offices there. The largest employer was the Post Office Department with more than 61,000 workers. Other large employers were the military departments, the Veterans Administration, the Treasury Department, and the Department of Health, Education, and Welfare.

The San Francisco area included 76,143 Federal workers in 1960, an increase of 4 percent, the same as in New York. The military departments, the Post Office Department, the Veterans Administration, and the Treasury Department were the large employers there.

The Philadelphia area included 72,068 Federal workers in 1960, an increase of 26 percent since 1950. Sizable increases in the military departments and the Post Office Department were recorded there. The Veterans Administration and the Treasury Department were also large employers in the area.

Chicago was next with 68,847 Federal employees. This was an increase of 16 percent over the 10-year period. The largest increase occurred among postal employees, the largest group in the area in both survey years. The military departments were large employers and their total had also increased. Two other large employers, the Veterans Administration and the Treasury Department, reported fewer workers in the area in 1960 than in 1950.

The Los Angeles-Long Beach area in California had increased almost 44 percent in the 10-year period to a total of 58,309 Federal employees in 1960. All of the major employing agencies reported increases. The Post Office Department remained the largest employer in the area; the military departments, the Veterans Administration, and the Treasury Department all reported sizable employment.

The Boston area included about 43,500 Federal employees in 1960. Totals for the standard metropolitan statistical areas in New England are estimates based on metropolitan area totals reported in 1959 and Statewide totals reported for 1960. The larger employers in Boston are the Post Office and military departments and the Veterans Administration.

The San Antonio, Tex., area had increased about 56 percent during the period. A total of 32,279 employees were reported in 1960. Most of the increase occurred in the military departments, which was 60 percent above the 1950 level.

The Norfolk-Portsmouth, Va., area included 31,273 Federal workers, a gain of 5 percent in the 10-year period. The Navy Department was the largest employer.

FEDERAL EMPLOYMENT IN METROPOLITAN AREAS—DEC. 31, 1960

(Showing Metropolitan Statistical Areas That Employ More Than 5,000 Federal Workers.)

Albany-Schenectady-Troy, N.Y.	9, 572	Memphis, Tenn.	10, 530
Albuquerque, N. Mex.	8, 330	Miami, Fla.	7, 250
Atlanta, Ga.	17, 751	Milwaukee, Wis.	8, 740
Bakersfield, Calif.	8, 699	Minneapolis-St. Paul, Minn.	15, 200
Baltimore, Md.	26, 621	Mobile, Ala.	17, 210
Birmingham, Ala.	5, 263	New Orleans, La.	12, 273
Boston, Mass.	*43, 468	New York, N.Y.	129, 478
Buffalo, N.Y.	8, 167	Newark, N.J.	16, 404
Charleston, S.C.	10, 768	Newport News-Hampton, Va.	10, 159
Chicago, Ill.	68, 847	Norfolk-Portsmouth, Va.	31, 273
Cincinnati, Ohio-Ky.	11, 165	Oklahoma City, Okla.	26, 177
Cleveland, Ohio.	17, 607	Omaha, Nebr.-Iowa	7, 271
Columbus, Ohio.	8, 653	Pensacola, Fla.	6, 976
Dallas, Tex.	11, 181	Philadelphia, Pa.-N.J.	72, 068
Davenport-Rock Island-Moline, Iowa-Ill.	6, 296	Phoenix, Ariz.	7, 346
Dayton, Ohio.	27, 718	Pittsburgh, Pa.	17, 019
Denver, Colo.	20, 895	Portland, Oreg.-Wash.	11, 525
Detroit, Mich.	24, 471	Providence-Pawtucket, R.I.-Mass.	*9, 011
El Paso, Tex.	5, 484	Richmond, Va.	6, 862
Fort Worth, Tex.	8, 165	Sacramento, Calif.	20, 628
Harrisburg, Pa.	15, 248	St. Louis, Mo.-Ill.	28, 097
Honolulu, Hawaii.	21, 591	San Antonio, Tex.	32, 279
Houston, Tex.	7, 863	San Bernardino-Riverside-Ontario, Calif.	18, 805
Huntsville, Ala.	15, 068	San Diego, Calif.	22, 816
Indianapolis, Ind.	14, 303	San Francisco-Oakland, Calif.	76, 143
Jacksonville, Fla.	9, 480	San Jose, Calif.	6, 399
Jersey City, N.J.	5, 242	Seattle, Wash.	13, 450
Kansas City, Mo.-Kans.	16, 585	Springfield-Chicopee-Holyoke, Mass.	*6, 132
Los Angeles-Long Beach, Calif.	58, 309	Tacoma, Wash.	7, 576
Louisville, Ky.-Ind.	9, 129	Utica-Rome, N.Y.	8, 853
Macon, Ga.	16, 660	Washington, D.C.-Md.-Va.	235, 864

* Estimated

NINE EMPLOY 20,000 TO 30,000

Nine other metropolitan areas included between 20,000 and 30,000 Federal employees in 1960. Arranged in descending order, they were St. Louis, Dayton, Baltimore, Oklahoma City, Detroit, San Diego, Honolulu, Denver, and Sacramento.

TWENTY EMPLOY 10,000 TO 20,000

Between 10,000 and 20,000 in size were San Bernardino, Atlanta, Cleveland, Mobile, Pittsburgh, Macon, Kansas City, Newark, Harrisburg, Minneapolis-St. Paul, Huntsville, Indianapolis, Seattle, New Orleans, Portland (Oreg.), Dallas, Cincinnati, Charleston (S.C.), Memphis, and Newport News-Hampton.

OTHER AREAS

Among the areas with more than 10,000 employees in 1960, the greatest growth occurred in Huntsville, Ala. Less than a thousand employees were stationed there in 1950; by 1960 there were 15,068. Three other cities, San Bernardino, Macon, and Mobile, had more than doubled in number of Federal employees. Gains of 50 percent or more occurred in Indianapolis, Charleston

(S.C.), Sacramento, Kansas City, Denver, and Oklahoma City.

Western and southern areas recorded more gains than northern and eastern areas. In the metropolitan areas surveyed in the northern and eastern sections of the country, most of the reductions occurred in employment of the military departments.

Flora M. Nicholson

THE NATION AND ITS NEEDS

"There is a rare distinction and satisfaction to work for one's country instead of for dollars, to pursue principle in lieu of profit . . . There is much to be said for the 'in-and-out' approach to government service. The man experienced in private pursuits brings that much more to a temporary sojourn in government later in life. The opportunity to serve is never foreclosed by a single decision at any single time. Whether it be now or later. Please remember that the nation has need of the services of those who desire to serve."—*From address by Edward R. Murrow, Director, U.S. Information Agency, at Johns Hopkins University, June 13, 1961.*



A Look at

LEGISLATION

Status (as of July 15) of major Federal personnel legislation on which some action has been taken by Congress:

LIFE INSURANCE

S. 1070, as amended by the Senate Subcommittee on Health Benefits and Life Insurance, provides additional life insurance of \$1,000 for employees whose salaries are less than \$10,000 and \$2,000 for those whose salaries are \$10,000 and above. The additional insurance would cost the same as the basic insurance—the employee would pay two-thirds and the Government would pay one-third of the cost. The additional insurance would not be subject to reduction on retirement.

Reported to Senate; pending on Senate Calendar.

MOTOR VEHICLES

H.R. 2883 provides for the defense of suits against Federal employees arising out of their operation of motor vehicles in the scope of their employment.

Passed House; pending before Senate Judiciary Committee.

PAY

H.R. 7377 and S. 1732 increase the limitation on the number of positions which may be placed in the top grades of the Classification Act of 1949, as amended, and the limitation on the number of research and development positions of scientists and engineers for which special rates of pay are authorized. The bills make salary adjustments in the Federal Executive Pay Act in order to restore in part the salary relationship with the Classification Act which existed prior to enactment of the Federal Employees Salary Increase Act of 1960. The bills also remove hearing examiner positions from the Classification Act of 1949, as amended, and provide for two statutory compensation levels for hearing examiner positions, GS-14 and GS-16.

House and Senate hearings in progress; pending before Post Office and Civil Service Committees.

PROMOTIONS

H.R. 1010 and S. 1730 amend the Classification Act to provide that upon promotion or transfer to a position to provide that upon promotion or transfer to a position than a 2-step increase of the grade from which he is promoted.

House subcommittee appointed to consider bill; pending before Post Office and Civil Service Committees.

RETIREMENT

S. 188, as introduced, provides for optional retirement after 30 years of service regardless of age with no reduction in annuity. As amended by the Senate Post Office and Civil Service Committee, the bill (1) establishes age 55 as the minimum age for voluntary retirement after 30 years of service with no reduction in annuity (present age is 60) and (2) eliminates reduction for the years between 55 and 60 for persons retiring on immediate annuity because of involuntary separation. The present reduction of 2 percent for each year under age 55 is retained.

Senate hearings completed; ordered favorably reported to Senate.

S. 739 and H.R. 5989 provide (1) a method for determining interest rates on civil service retirement and disability fund investments and (2) automatic appropriations to guarantee that the fund never fall below the sum to all employees' credit.

Passed Senate with amendment; House hearings in progress.

H.R. 6141 limits to cases involving the national security the prohibition of payment of annuities to retired employees convicted of certain offenses. (Hiss law.)

Passed House; pending before Senate Post Office and Civil Service Committee.

SALARY RETENTION

H.R. 7043 amends the salary retention provisions of the Classification Act of 1949 to include statutory salary increases in the retained rates of employees involved in downgrading; extends to postal field service employees salary retention protection in downgradings similar to that afforded employees under the Classification Act.

Reported favorably to House by Post Office and Civil Service Committee; pending on House Calendar.

TRAVEL

H.R. 3279 increases the maximum per diem allowance for employees traveling on official business from \$12 to \$16 a day, the maximum allowance under unusual circumstances from \$25 to \$30, the motorcycle mileage allowance from 6 cents to 8 cents, and the automobile and airplane mileage from 10 cents to 12 cents. The bill also provides for actual expenses for parking.

Passed House; reported to Senate; pending on Senate Calendar.

Mary V. Wenzel

Snapshots of

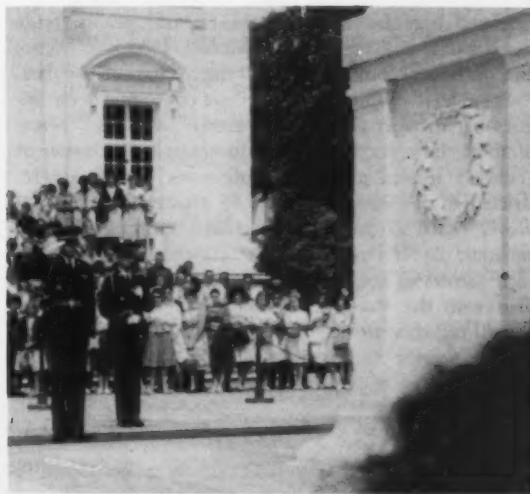
TEENS ON TOUR



RARE IS the American who has not set his sights on a visit to his Nation's Capital. Each year they come—7 to 8 million—and perhaps none wears the wonder of the experience so unrestrainedly on glowing face as the visiting high school student. Some 500,000 of them tour the city each year, mostly in school-sponsored chaperoned groups. They come to Washington for one reason only: this is the heart of democratic Government. Here the past is preserved and on display; here today's history is in the making through-out the halls of Government.

TO SEE what the student sees, the *Journal* contacted the Visitor's Bureau of the Washington Board of Trade and arranged to take the tour with a typical school group, the senior class from Lawrenceville, Ill., a town of 5,500. Of 114 graduating seniors, 70 were able to make the bus trip—a school tradition every spring. The group (shown arriving and at a few of the usual stops) crammed a panorama of sightseeing into two full days. Much was seen, though often fleetingly; much had to be by-passed. And, in depart-

ing, practically everyone expressed the hope "to come back some day to take a closer unhurried look at the things I saw, as well as the things I missed." (See the *Journal's* editorial, page 1, on merits of proposed Visitors' Reception Center.)



CLASSIFICATION TOPICS

REDUCING THE PAY DATA GAP

In December 1960 the Department of Labor published the report of the first Bureau of Labor Statistics national survey of white-collar salaries. Results of the second annual survey, conducted during fiscal 1961, are being readied for publication this fall.

An ever-increasing proportion of white-collar occupations to total employment and expanding demands for professional and administrative personnel have underscored the lack of comprehensive, authoritative data on white-collar pay levels. The new program is filling in this gap in existing pay information.

Future students of pay administration may well characterize the 1950's and 1960's as the era of the pay survey. The Bureau of Labor Statistics' community wage survey program has long provided annual reports of blue-collar and clerical pay rates. Federal agencies survey blue-collar wages in many localities in setting wage schedules for their trades, crafts, and labor groups. National organizations, professional associations, trade associations, management consultants, groups of firms, and individual companies collect many kinds of pay data.

Some well-established surveys are concerned with salaries of managerial and professional positions. Many of them, however, are limited to a single profession or a closely related group of professions. Some are restricted to one locality; others to a single type of employer (such as public jurisdictions, colleges and universities, or libraries). Some associate salaries with such factors as length of time since graduation, rather than with the work performed. Neither individually nor all together are they designed to present a balanced cross-section of managerial and professional pay in the United States economy.

MAJOR FEATURES OF BLS SURVEY

The Bureau of Labor Statistics survey makes available for the first time statistically valid national average salary rates for a representative range of clerical, managerial, and professional positions. In addition to common types of clerical and drafting positions, fields surveyed include accounting, law, chemistry, engineering, personnel management, and management of office services. Levels of responsibility range from entrance positions for trained but inexperienced employees to highly responsible positions just under top executive levels.

Rates expressed in the Bureau of Labor Statistics report are national averages for the occupational work levels covered. The findings illustrate the point that prevailing salary levels can be determined on other than

a locality basis and that prevailing salary rates do not have to be *locality* rates.

Pay information is collected only for positions that match predetermined position descriptions, copies of which are included in the published report. Thus, the salary findings can be examined with full knowledge of the work levels they represent.

The position descriptions used in the survey are designed, among other things, to correspond with Classification Act grade levels. Staff of the Government's central agencies concerned with pay worked closely with the Bureau of Labor Statistics in the design of the survey to assure that the results would be suitable for comparing Classification Act and private enterprise pay levels. Survey findings for individual positions, of course, do not in themselves provide a comparison of the general level of the Classification Act schedule with pay levels in private firms. Many technical considerations and analyses of the findings would be involved in making such an overall comparison.

Developing useful job descriptions presents a key problem in any major pay survey using a job-matching technique. It is especially acute in a survey covering the most complex kinds of white-collar positions, as this one does. The problem is created by two opposing considerations: (1) each description must be sufficiently broad to secure enough matches to be worthwhile, and (2) each description must be sufficiently specific to secure only valid comparisons.

SECOND SURVEY IMPROVED

Job descriptions used in the survey are prepared or reviewed by the Standards Division of the Civil Service Commission's Bureau of Programs and Standards. Those used in the first survey proved to be very satisfactory, both in the results produced and in providing a foundation for improvements. Of the 75 descriptions keyed to specific Classification Act grades, 60 produced results clearly matching the intended Classification Act grade levels. Some of the questionable descriptions have been improved in the second survey, others have been eliminated. Additional descriptions have also been prepared to strengthen survey coverage at certain grade levels.

The Bureau of Labor Statistics and other Federal agencies concerned are continuously appraising survey coverage, forms, and techniques. Improved position descriptions and other refinements should produce second-year findings that are even more representative and useful than those of the initial survey.

Robert F. Milkey



SHELF-HELP

SCIENCE AND THE ADMINISTRATOR

Among the increasing preoccupations of the administrator in Government today are the problems of scientific and engineering manpower. These problems have proliferated as the result of the unprecedented role that science is playing in our national economy. Many of management's answers to how to maintain efficiency in Government programs as we knew them yesterday are outmoded today.

Fortunately for the administrator, a number of our universities and the National Science Foundation, aware of the perplexities this new development has caused, have undertaken studies that provide guides to the solution of major managerial problems.

Actually, the answers to the newly generated problems are as logical and plausible as were the solutions before the recent scientific era—if the administrator will only bear in mind that a new set of factors is present and that due allowance needs to be made for a new set of conditions.

To guide the administrator to what is being learned about management in the scientific era, *Shelf-Help* is identifying some of the significant publications in this field.

* * *

"Characteristics of Engineers and Scientists" is a study made under the auspices of the Bureau of Industrial Relations of the University of Michigan by Lee E. Danielson. Its purpose, according to Dr. Danielson, is to make a qualitative study of the characteristics and motivations of scientists and engineers with a view to highlighting their differences as a group from manual, clerical, and technician groups.

These differences emphasize the need to recognize that the scientist and engineer's approach to a job, kind of supervision and recognition desired, and personality traits and goals call for a treatment that is out of the ordinary. To achieve the maximum productivity and satisfaction of scientific and engineering personnel demands managerial choices that take cognizance of these differences.

"The Scientist in American Industry," by Simon Marcson, is the first of a series of Princeton studies of organizational environments as they affect scientific personnel. Later studies will be concerned with scientists in a Government laboratory devoted to basic research and in a university environment devoted to teaching and fundamental research.

Although Dr. Marcson's study concerns itself with the

Characteristics of Engineers and Scientists. Lee E. Danielson. University of Michigan Press, 1960. 136 pp.

The Scientist in American Industry. Simon Marcson. Princeton University Press, 1960. 159 pp.

Teamwork in Technology: Managing Technician Manpower. Graduate School of Business Administration, Harvard University. Technician Manpower Associates, Scarsdale, N.Y., 1959. 172 pp.

Britain's Scientific and Technological Manpower. George Louis Payne. Stanford University Press, 1960. 466 pp.

Scientific and Technical Personnel in American Industry. The National Science Foundation, 1959. 66 pp.

Higher Education and Training in Emerging Fields of Science and Technology. Papers of the Eighth Conference on Scientific Manpower, National Science Foundation, 1960. 38 pp.

scientist working in an industrial research laboratory, there are nevertheless sufficient similarities to Governmental environment, at least in the attitudes and professional needs of the scientist, to recommend it to the Government administrator.

As a partial answer to the alarm that has been raised over the short supply of scientists and engineers, the Graduate School of Business Administration of Harvard University has published a study, "Teamwork in Technology: Managing Technician Manpower," which makes a case for the relief of pressures on engineers and scientists through the utilization of well-trained technicians. It is replete with practical guides for hiring, training, supervising, and advancing the technician in order to obtain optimum utilization.

Too often, America's manpower needs are considered in isolation. The National Science Foundation believes that "they must be measured against the total needs and capacities of the western world, the uncommitted countries and the Communist Bloc." Under the Foundation's aegis, George Louis Payne, in "Britain's Scientific and Technological Manpower," has assembled a monumental array of data, available material, and annotated

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two key contributions that were vital to the development of the A-bomb—the fractionization of isotopes of hydrogen in 1934 by E. W. Washburn, E. R. Smith, and F. A. Smith to produce heavy water, and the purification of uranium and graphite during World War II.

Next of the new scientific organizations to be established was the National Advisory Committee for Aeronautics in 1915. It grew partly from research sponsored by the Smithsonian Institution, which had traditionally played a shaping role in the Government's scientific operations. NACA was established by Congress to "supervise and direct the scientific study of the problems of flight, with a view to their practical solution," and to "direct and conduct research and experiment in aeronautics." Its research was a fundamental factor in the ascendancy of the United States as the world's undisputed leader in military and commercial aeronautics.

Among NACA's long list of accomplishments is the development of the wind tunnel as a tool for research in aerodynamics, de-icers for safety in flight, the concept of the cowl on engines which made possible the use of larger piston engines, the concept of the use of the research airplane, and the "area rule" concept for fuselage design. NACA and its 5 research centers became the nucleus for the present National Aeronautics and Space Administration.

A few years after NACA was established, another outstanding Federal organization with research as its sole mission was founded—the Naval Research Laboratory. Although legislation to build and finance the laboratory was passed in 1916, U.S. involvement in World War I delayed its opening until 1923.

In the four decades since its founding, NRL has produced many of the scientific marvels of our age, including many developments in radio, radar, and sonar. Dr. Robert M. Page, NRL's Director of Research, has compiled an "incomplete" list of some 80 NRL scientific "firsts." Dr. Page himself was one of the trio, along with A. Hoyt Taylor and L. C. Young, who in 1934 originated the development of radar and built the first radar in the world for detection of aircraft.

From basic research at NRL on the structure of molecules and the relation of molecular structure to physical properties of materials has come a large array of synthetic materials having practical properties far superior to corresponding natural materials. Products resulting directly from NRL research form the basis of industrial production running into many millions of dollars a year, among them synthetic lubricants which work over extremely wide temperature ranges, practically indestructible long-life greases, non-inflammable hydraulic fluids, detergents, water-repellants, cleaning fluids, and a seemingly endless list of others.

The transformation of metal casting from an art to a science and resulting foundry practices in metal casting today stem directly from research on metal casting at NRL before and during World War II. The laboratory produced similar transformations in the field of welding steels; its inquiry into the mystery of many failures of Liberty ships provided a reliable basis for predicting performance of steels in naval uses and led to techniques for testing steels and criteria for judging steels in industry.

The thirties saw the development of two more great scientific organizations whose work has been highly significant—the National Institutes of Health, now located in Bethesda, Md., which began as the Hygienic Laboratory in 1887, and the Agricultural Research Center established at Beltsville, Md., in 1934.

Research at NIH cuts across the whole spectrum of medical science through the work of its own highly competent professional staff, numbering several thousand in seven separate Institutes, and that of numerous other researchers and institutions making investigations under grants from Public Health Service laboratories. NIH achievements include the development of the drug phenazocine as a replacement for morphine by Drs. Everette L. May and Nathan B. Eddy; discovery by the late Dr. Egon Lorenz that the damaging and lethal effects of radiation could be prevented by transplants of bone marrow from nonirradiated animals; pioneer developments in tissue culture technology by Dr. Wilton R. Earle which have made the method broadly applicable to many fields of medical research, especially to studies of viruses and development of vaccines against viral diseases; and the development by Dr. Milton Shy and coworkers of the first brain-scanning device using radioactive isotopes to detect and locate brain tumors.

Beltsville has become a part of our language, if for no other reason than the development there by Stanley J. Marsden of the famous Beltsville Small White turkey, bred especially for small families and apartment-size ovens, which now accounts for the bulk of all small turkeys sold to American housewives. But if most Americans are unaware of the Agricultural Research Center and the genius of its scientists, they are well acquainted with many of the products it has developed—the wonderful Zoysia grasses, discovered in China by Frank M. Meyer; 2,4-D, the amazing chemical that was converted from a laboratory curiosity to a practical weed-killer through the work of Drs. J. K. Mitchell and Paul C. Marth; and the versatile aerosol bomb invented at Beltsville by L. D. Goodhue and W. N. Sullivan. Developed originally for insecticides, this type of dispenser is now used to package a great variety of products from paint to shaving cream. The discovery by Drs. Sterling B. Hendricks, Harry A. Borthwick, and Marion W. Parker of how light controls plant development is one of the greatest discoveries in biological science of the 20th Century and may provide the answer



LAMPREYS LANDED—Dr. James W. Moffett (left), Chief of Great Lakes Fishery Investigations, U.S. Fish and Wildlife Service, and Dr. Vernon C. Applegate (center), director of the Hammond Bay Station, examine trapped sea lampreys with W. Fenton Carbine, regional director, Bureau of Commercial Fisheries, USFWS. Drs. Moffett and Applegate developed the chemical and electrical procedures which are bringing under control this parasitic threat to the \$5.5 million Great Lakes trout fishing industry—one of the many scientific achievements of the U.S. Fish and Wildlife Service in protecting America's wildlife resources.

to man's complete control of plant growth from seed germination through plant flowering and fruiting.

In more recent years, the number and variety of scientific organizations in Government have increased to meet changing needs of the times, the Nation, and the people. Many Federal scientific establishments are among the most outstanding in the world, and some are unique in their missions and facilities. Among the many outstanding modern establishments are: the U.S. Communicable Disease Center (Atlanta, Ga.) of the Public Health Service; the Navy Underwater Sound Reference Laboratory (Orlando, Fla.), the largest of its kind in the world; the Army Chemical Corps Biological Laboratories (Ft. Detrick, Md.); and the Air Force Cambridge Research Laboratory (Cambridge, Mass.).

ROLL OF HONOR

As scientific missions in Government have increased in number and importance, many outstanding careerists have been accorded official recognition as well as honors from a number of professional groups and other non-Federal organizations.

Fully half of the 20 Presidential Awards for Distinguished Federal Civilian Service—highest honor the Government can confer on a civilian employee—have been given for achievements in science. In addition to Dr. Page of the Naval Research Laboratory (primarily for his work in radar) and Dr. Hendricks of the Agricultural Research Service (primarily for his discoveries in soil chemistry), the following outstanding career sci-

tists have received the Presidential Award—

- William B. McLean, Technical Director of the U.S. Naval Ordnance Test Station at China Lake, Calif., for "conceiving and directing the development of the Sidewinder Guided Missile Weapon System."
- Doyle L. Northrup, Technical Director of the Special Weapons Squadron of the Department of the Air Force, for "the establishment of a network to detect atomic explosions anywhere in the world."
- Hazel K. Stiebeling, Director of the Department of Agriculture's Institute of Home Economics, for "lasting contributions to the science of human nutrition."
- Wernher von Braun, then Director of the Development Operations Division of the Army Ballistic Missile Agency and now head of NASA's George C. Marshall Space Flight Center, for "outstanding contributions in missile development and in the launching of the first U.S. satellite."
- Hugh L. Dryden, then Deputy Director of NACA and now Deputy Administrator of NASA, for "pioneering aeronautical research" and for "scientific and administrative leadership in planning and organizing U.S. space exploration."
- Winfred Overholser, M.D., Superintendent of St. Elizabeths Hospital, for "profound and far-reaching contributions in the field of mental health."
- Wilbur S. Hinman, Jr., Technical Director of Army's Diamond Ordnance Fuze Laboratories, for "brilliant leadership of scientists and engineers in the creation of new electronic techniques and devices and his own technical contributions."
- Richard E. McArdle, Chief of the Forest Service, for "imagination, vision, and inspiring leadership which have brought exceptional progress in the development and protection of vital forest resources."

Scientific and technical achievements have also been the basis for virtually all of the highest cash awards—ranging from \$5,000 to \$25,000—made under the Government-wide Federal Employees Incentive Awards Program since its establishment in 1954. The first \$25,000 award, and to date the only one of that size made to an individual, went to Dr. McLean for the Sidewinder development in 1956. The other two highest awards went to a team of Diamond Ordnance Fuze Laboratories scientists, headed by Norman J. Doctor, for their work in microminiaturization of electronic parts, and to a three-man scientific team at Army's Picatinny Arsenal—Robert M. Schwartz, Milton E. Epton, and the late Irving Mayer—for their work in nuclear weapons development, including the development of atomic weapons for use by infantry troops.

Many Federal scientists have also been among the recipients of such top non-Federal awards as the Career Service Awards of the National Civil Service League, the Rockefeller Public Service Awards, and the Flem-

ming Awards of the Washington, D.C., Junior Chamber of Commerce.

Illustrative of the many who have received the most coveted awards in their special fields are Richard T. Whitcomb, who received the Collier Trophy for his development of the "area rule" concept at NACA, and Jesse Charles Johnson, director of the Division of Raw Materials of the Atomic Energy Commission, who recently received the medal and a \$25,000 prize of the Ambrose Monell Foundation; he directed the successful search for domestic uranium that eliminated U.S. dependence upon foreign sources.

THE "BIG PICTURE"

What brings such outstanding people to pursue careers in science in Government—especially when many of them have opportunities to earn considerably more money in private employment?

Although there is no pat answer to this question, there is general agreement on several factors which influence many decisions to join and remain on Uncle Sam's science team.

"The nature of the work itself" is one way to capsule the most frequently cited reason—the opportunity presented to participate in important, often vital, scientific programs affecting the welfare of all of the people. Closely related is the attraction of working with recognized leaders in their fields, in world-renowned laboratories, with unexcelled facilities.

Another reason that is important to many scientists is to be able to pursue research without the pressure of the profit motive and to have their work appraised on its scientific merit rather than on the basis of the sales potential of possible applications. Too, scientists in Government are more likely to find opportunities for fundamental research than in most private employment.

Opportunities[®] for professional recognition are also important to many scientists, and the generally liberal

publication policies (e.g., results of all Agricultural Research Service work are published) and other possibilities for recognition in Federal service have strong appeal. Many Federal agencies—the Naval Research Laboratory, for example—make a conscious effort to recognize and reward scientists under the Incentive Awards Program. The Navy Department itself has recently established a "Navy Award for Distinguished Achievement in Science," which will consist of a medal, lapel emblem, certificate, and cash award of not less than \$5,000.

Taken together, these and other factors can constitute a powerful magnet—strong enough to cause many who have left Federal service for greener fields to return when they found that they missed being close to the "big picture." And science has become a truly essential part of the "big picture" that is the modern Federal Government, standing close today to the realization of the potential seen for it by Jefferson, Adams, Madison, Hassler, Bache, Powell, and others who championed the idea of science in Government.

The vital relationship of science to modern Government perhaps was never more pointedly illustrated than in President Kennedy's recent call for a national decision "that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth."

"This decision demands a major national commitment of scientific and technical manpower, material and facilities, and the possibility of their diversion from other important activities where they are already thinly spread," the President explained. The decision would constitute the greatest commitment of money, talent, material, and facilities to a single national objective other than winning a war—with the ultimate cost possibly totaling \$40 billion!

What greater testimony to the importance of the scientist in civil service could there be?



SHELF-HELP—

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bibliography of official publications on British technological manpower and education. Included are the descriptions of postwar developments that will prove useful as a guide in adapting American education to the demands of the scientific age.

The Foundation, with the cooperation of the Bureau of Labor Statistics, has assembled a compilation of data, "Scientific and Technical Personnel in American Industry," with a view to aiding in developing programs and policies designed to strengthen the country's scientific manpower resources and research efforts. While not as comprehensive as the study of British manpower, it nevertheless provides a complementary and supplementary body of similar data.

For those who are interested in the revolution that is taking place in education for science and engineering, the National Science Foundation's Conference on Scientific Manpower provided a host of clues to what educators and administrators of scientific programs are thinking and doing. The conference is reported in a series of papers titled "Higher Education and Training in Emerging Fields of Science and Technology." The papers are well and simply written by qualified authorities and their thoughtfulness should provide a degree of assurance that the educational challenge is not being neglected.

Franklin G. Connor



STANDARDS and TESTS

NEW QUALIFICATION STANDARDS

New qualification standards for the Writing and Editing Series, GS-1082-0, and the Public Information Series, GS-1081-0, will be issued soon by CSC's Standards Division. These standards embody some new approaches to securing the best-qualified employees in these important fields of work.

While the Federal Service Entrance Examination will continue to be used to fill these positions at GS-5 and GS-7, the new standards no longer require applicants to have majored in English or Journalism in order to qualify in either of these fields of work. Instead, the new standards provide for using scores on the verbal ability and report writing parts of the FSEE in order to determine whether applicants have the necessary language ability that makes for success in these two different occupations.

At the higher levels, the new standards distinguish between the skills required to do writing and editing work, and those required for carrying out public information functions. Writers and editors must be able to acquire information about a variety of subjects, to analyze and select the pertinent facts, and to present them in written form for different audiences and different information media such as newspapers, magazines, and radio and TV broadcasts. Public information officers and specialists must be able to write and rewrite copy, but they are primarily required to be able to evaluate all kinds of material including artwork, exhibits, and motion picture, radio, and television material. They must also determine how to use it to present information about the activities, achievements, and plans of the Federal Government. While these different skills may be found in the same individuals, typically they are not found to the same degree in the same person. The new standards are designed to make it possible to determine in which of these fields an applicant's particular strengths lie, and to rate him in terms of his relative ability to carry out these different kinds of functions.

PROGRESS REPORT

The following new or revised position classification standards were distributed to agencies the first part of June:

- Autopsy Assistant
- Fire Protection and Prevention Positions
- Plant Pest Control Inspector (Agriculture)
- Public Information Officer

The following new or revised position classification standards were ordered from the Government Printing Office for August distribution:

- Cartographer
- Information Receptionist
- Marine Engineer
- Medical Officer (Clinical)
- Naval Architect
- Optometrist
- Pharmacist
- Plant Pest Control Technician (Agriculture)
- Price Analyst

The following qualification standards were printed for April-May-June distribution:

- Agronomist
- General Physical Scientist
- Investigator (Treasury—Internal Revenue Service)
- Speech Pathologist
- Speech Technician
- Educational Adviser
- Autopsy Assistant
- Forestry Aid
- Range Aid
- Imported Animal By-Products Inspector (Agriculture)
- Virus-Serum Inspector (Agriculture)

Tentative drafts of classification or qualification standards are now being or soon will be circulated for comment for the following positions:

- Veterans Claims Examiner (Veterans Administration)
- Passport Examiner (State)
- Marine Cargo Specialist
- Veterinarian
- Loan Examiner
- Medical Officer (Occupational Health)
- Audio-Visual Specialist
- Illustrator
- Personnel Clerk and Technician
- Land Law Examiner (Interior)

Those standards which pertain to only one agency are so identified by the name of the agency following the position title.

INSIGHT—

(continued from page 1.)

Gradually, the emphasis of the film could turn from the city to the purposes, structure, and processes of Government. Using history and the city as a framework, the film could describe the role that the Government plays in the life of the citizen, and the process by which public opinion or national necessity is translated into legislative intent, and thence into executive action and judicial interpretation.

The film would be the main attraction of the visitors' center, but other features and services could enhance its usefulness. In the open areas surrounding it visitors might find displays, provided by the departments and agencies, which would describe a variety of Government programs and the men and women who carry them out. There could be an information desk with a message service; wall directories of public and commercial facilities and services; calendars of coming cultural events of interest to the public; and maps, diagrams, and models of the city and its features. Rest and refreshment facilities could be located in or near the center's main building, all of it located in a park-like setting where the visitor could sit, or stroll for a few quiet moments.

The center would give students and other visitors their initial orientation for intelligent enjoyment of their National Capital's unique character and beauty, and thus enhance immeasurably the value of their visit. The center's program would be a natural complement of the tours and services now provided by Members of Congress for visiting constituents.

Finally, all branches of Government would derive incalculable benefits through clearer understanding by the public of the Government's programs. Greater familiarity with the Government should help attract more and better recruits into the Federal service, while assisting in the growth of a better informed and more responsible electorate.

In a city of inanimate monuments and memorials, is this idea of a living memorial impractical? Would a Madison or a Wilson or a Roosevelt think of it as an unfitting memorial to him? Would it gradually create a better understanding of our American heritage? Would it gradually make recruiting for the Federal service easier?

This is a long-range idea, and not solely of interest to Government. It is worthy of more discussion and debate than it has had, both within and outside the Federal community.

Worth Noting (Continued)

nounced recently. He said the conference will focus its attention on the need for (1) a clearinghouse of information through which Government and universities may keep informed of pertinent developments in their respective adult-education activities, (2) criteria to guide the timing of further educational opportunities for public administrators, (3) better evaluation of present efforts and future requirements in executive development in the Federal service, and (4) innovation in the universities directed toward the special problems of teaching mature and experienced adults.

TRAINING NEWS: Under terms of the Government Employees Training Act, agencies should begin making their second review of training needs before October 1. CSC's inspection staff will inquire, in the normal course of inspections, whether the required reviews are being made, how they are made, how often, and with what results. . . . CSC has revised its pamphlet, *Assessing and Reporting Training Needs and Progress* (see CSC Bulletin No. 410-1). When a printing date is scheduled, agencies will be notified and invited to submit orders. . . . CSC's Fall 1961 Interagency Training Programs bulletin, which will be distributed about August 15, will contain a particularly wide selection of management courses. Two new courses of particular interest to employee development officers are a 3-day refresher Institute in Training Aids and Methods in September, and a 2-week Basic Course in Employee Development in December.

ANNIVERSARIES: Government Printing Office recently observed its Centennial with ceremonies in Washington, D.C. In its 100 years of operation, GPO has become the largest and most completely equipped printing plant in the world. . . . This month marks a half century of naval aviation. Navy's first airplane was delivered on July 1, 1911.

MISCELLANY: CSC is re-examining its regulations, instructions, and standards to assure full compliance with Presidential policy and intent that "career employment practices be maintained without discrimination and with equal opportunity," CSC Chairman John W. Macy, Jr., recently informed heads of Federal departments and agencies. In a letter to agency heads, Mr. Macy announced that CSC would issue changes in its instructions to agencies to put renewed emphasis on the principles of merit selection and nondiscrimination in the operation of promotion programs in the career service. . . . Public service won a ringing endorsement from a panel of young administrators at the recent National Conference of the American Society for Public Administration in Philadelphia. The youthful administrators cited a preference for careers in Government "because the public service offers a challenge that requires our best efforts." . . . Former CSC Chairman Roger W. Jones, now Deputy Under Secretary of State for Administration, recently received the Stockberger Award for outstanding achievement in public administration from the Society for Personnel Administration. Mr. Jones was cited for his leadership in personnel administration and his role in effecting a smooth transition of Government to the new administration. . . . Bureau of the Budget has announced the establishment of a Management Clearing House File to help Federal agencies benefit from each other's efforts to develop better management methods. The file covers all functions or aspects of the management process except personnel administration: CSC serves as the central reference source in the latter area through its Library (see BOB Circular No. A-53).

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